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SUPPLEMENT

TO THE

ANNUAL REPORT

OF THE

State Engineer and Surveyor

COMPLIMENTS OF

J. A. BENSEL

State Engineer and Surveyor

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SUPPLEMENT

TO THE

ANNUAL REPORT

OF THE

State Engineer and Surveyor

OF THE

STATE OF NEW YORK

For the Fiscal Year Ended September 30, 1912

TRANSMITTED TO THE LEGISLATURE JANUARY 7, 1913

ALBANY
J. B. LYON COMPANY, PRINTERS
1913

REPORT

OF

BUREAU OF HYDRAULICS

DEPARTMENT OF BARGE CANAL,

Comprising the Thirteenth Annual Report on Stream Gaging

JOHN P. NEWTON,
Assistant Engineer.

Report on the Gaging of Streams for 1912.

Hon. John A. Bensel, *State Engineer and Surveyor:*

Sir.— I have the honor to submit the report of the Bureau of Hydraulics, Barge Canal Department, for the calendar year 1912.

This report contains stream gaging data obtained during the year 1912, as follows: The observations of water-surface elevations and records of the discharge of streams along the lines of the Barge canal; gaging records of streams throughout the state, furnished by the United States Geological Survey in coöperation with this Department, and other stream gagings furnished by corporations and individuals.

SCOPE OF WORK DONE.

The Bureau of Hydraulics, as a specific branch of the Barge Canal Department, was organized in 1907. The work carried on by this Bureau is chiefly along the following lines:

(1) Maintenance of gaging stations in connection with the Barge canal work.

(2) Investigations and reports on special hydraulic problems arising in connection with the Barge canal work.

(3) Preparation of defense for the State in hydraulic cases, including claims for backwater, damages to water power by diversion and appropriation and other similar cases before the State Board of Claims.

METHODS EMPLOYED.

The methods employed in obtaining the data contained in this report have been described in detail in numerous preceding reports and it is not deemed necessary to elaborate further on the fundamental principles involved in this class of work.

Generally speaking, the methods employed are substantially the same as have been in use in connection with this work for several years past and are such as best commend themselves

262988

to those engaged in this class of work. Recently numerous staff and chain gages have been replaced or augmented by automatic recording gages by the United States Geological Survey, which coöperates with this Department, and in several cases the comparative results of gage-readings and discharge obtained from both types of gages at the same station simultaneously are contained in this report.

ACKNOWLEDGMENT.

Acknowledgment should be made to Mr. J. Waldo Smith, Chief Engineer, Board of Water Supply of the city of New York, who has furnished the records of Catskill streams, with permission to publish these records in this report. Acknowledgment is also due to several corporations and individuals for data furnished.

The computations of records furnished by the United States Geological Survey in coöperation with this Department, have been made by Mr. C. C. Covert, District Engineer of the Water Resources Branch of the United States Geological Survey.

A number of records which have been furnished by the State Conservation Commission are also contained in this report. These gagings have been made by the United States Geological Survey in coöperation with the Conservation Commission.

ST. LAWRENCE RIVER DRAINAGE.

GENERAL FEATURES.

St. Lawrence river receives the flow of a number of New York streams having their sources in a northerly slope of the Adirondacks and fed by the numerous lakes with which the region is dotted. Some of these rivers, as the Grass, Raquette and St. Regis, lie entirely within the United States; others, notably Salmon, Trout, Chateaugay and English rivers, cross the international boundary and flow northward into the St. Lawrence in Canada, as does also Richelieu river, the outlet of Lake Champlain. The following table gives a list of the principal tributaries of the St. Lawrence in the United States, with the areas drained by them determined chiefly from Bien's Atlas of the State of New York.

Drainage Areas of St. Lawrence River Tributaries in the United States.

	Square miles.		Square miles.
Oswegatchie river	1,609	Salmon river *a*	273
Grass river	637	Trout river *b*	129
Raquette river	1,219	Chateaugay river *b*	199
St. Regis river	910	English river *b*	53
Little Salmon river *a*	103	Lake Champlain *c*	7,867

a Above junction near international boundary. *b* At New York state line. *c* Above outlet.

The St. Lawrence drains, through Lake Champlain, an area of 4,560 square miles in the State of Vermont. This drainage is practically all from Missisquoi, Lamoille and Winooski rivers and Otter creek.

LAKE CHAMPLAIN DRAINAGE BASIN.

DESCRIPTION OF BASIN.

Lake Champlain occupies a long and narrow valley, extending in a north-south direction and forming a part of the boundary between New York and Vermont. The elevation of the lake is about ninety-five feet above tide and the water-surface area is 436 square miles.

The drainage basin is irregular in form, being about seventy-five miles wide from a point opposite Middlebury, Vt., northward to the outlet of the lake at Rouses Point, on the international boundary. South of Middlebury the average width of the basin is about thirty-five miles and the lake itself is very narrow, forming virtually a drowned river.

The tributary region is rugged and mountainous, mostly covered with forest and with little depth of soil except in the stream valleys. The drainage is received almost entirely through large tributaries, there being little direct coast drainage into the lake. The outlet of the lake is Richelieu river, which flows northward from Rouses Point to St. Lawrence river.

In estimating the run-off from this basin in previous years the drainage area has been taken as 7,750 square miles. Maps have recently become available from which the area of the lake and its tributary drainage basin have been more accurately determined, as shown in the following table:*

---

* Table here presented is a revision of that appearing in the 1907 report.

Drainage Areas Tributary to Lake Champlain.

LOCALITY.	AREA IN SQUARE MILES.		
	Place to place.	Sub-total.	Total.
Pike river and adjacent area in Canada		*a*242.00	
Missisquoi river in Canada		*b*245.00	
Land area in Canada above outlet			487.00
Missisquoi river in Vermont		*b*615.00	
(Total Missisquoi river, 860 square miles.)			
Lamoille river		*b*725.00	
Winooski river		*b*995.00	
Otter creek		*b*935.00	
Eastern coast drainage		*b*534.40	
Mettawee, Poultney and Castleton rivers in Vermont		*c*376.00	
Land area in Vermont, except islands			4,180.40
Wood creek above Smiths Basin	18.60		
Big creek above junction with Wood creek	35.16	53.76	
Wood creek, Smiths Basin to Fort Ann	9.90	63.66	
Halfway creek above Kane's falls	78.82		
Halfway creek, Kane's falls to junction with Wood creek at Fort Ann	6.69	85.51	
Wood creek at Fort Ann, including Halfway creek		149.17	
Wood creek, Fort Ann to junction with Mettawee	55.73	204.90	
Mettawee river in Vermont	151.90		
Mettawee river in New York	55.70		
Total, Mettawee river		207.60	
Total, Wood creek and Mettawee river at junction		412.50	
Wood creek junction, Mettawee river to Whitehall	13.65	426.15	
Wood creek, Whitehall to junction with Poultney river	1.65	427.80	
Castleton river, in Vermont	100.90		
Poultney river, including Castleton river in Vermont		254.80	
Poultney river in New York		11.00	
Poultney river, total to junction with Wood creek		265.80	
Total, Wood creek and Poultney river at junction			693.60
Wood creek, Mettawee and Poultney rivers in New York			286.90
Lake George outlet		220.10	
Bouquet river		*c*268.10	
Ausable river		*d*521.30	
Little Ausable river		*d*75.10	
Saranac river		*d*629.60	
Little Chazy river		*c*63.80	
Big Chazy river		*d*299.40	
Western coast drainage		*d*344.60	

a From maps of Canadian Geological Survey. Scale: 1 inch = 4 miles.
b United States post-route maps. Scale: 1 inch = 12.5 miles.
c Topographic maps of U. S. G. S. Scale: 1 inch = 1 mile (nearly).
d Bien's Atlas of New York. Scale: 1 inch = 2.5 miles.

Lake Champlain Drainage—(Continued).

LOCALITY.	AREA IN SQUARE MILES.		
	Place to place.	Sub-total.	Total.
Land area in New York, except islands	....	....	2,708.90
Islands in New York	....	[e]55.20	....
Total land area above outlet	....	....	7,431.50
Water-surface in Canada	....	[e]16.50	....
Water-surface in United States	....	[e]419.10	....
Total water-surface	....	435.60	....
Total drainage area above outlet	....	....	7,867.10
Richelieu river, Rouses Point to Chambly	[a]310.00	....	....
Total drainage area above Chambly	....	....	8,177.10
Richelieu river, Chambly to mouth	[a]626.30	....	....
Richelieu river, total	....	936.30	....
Total drainage area above mouth	....	....	8,803.40

[a] Fom maps of Canadian Geological Survey. Scale: 1 inch = 4 miles.
[e] Charts of U. S. Coast and Geodetic Survey. Scale: 1 : 40,000.

RICHELIEU RIVER AT FORT MONTGOMERY, ROUSES POINT, N. Y.

A record of the height of Lake Champlain at Rouses Point, at the head of Richelieu river, the outlet of the lake, has been kept at Fort Montgomery, by the United States Corps of Engineers, beginning in 1875. Through the courtesy of Capt. Harry Taylor, the gage readings taken by William McComb, the fort keeper, at 9 A. M. each day, are reported weekly to the United States Geological Survey.

The depth of the water is taken on a reference mark on the base of the scarp wall, at the north face of bastion B, about three feet from the angle with the east curtain of Fort Montgomery. This reference point is 1.50 feet above an assumed zero, and 1.50 is added to the measured depth to determine the gage reading. In winter the depth as the water rises in a hole in the ice is commonly taken. On windy days the depth is taken in a well within the fort inclosure by measuring the depth on a flagstone in the bottom of the well.

Elevations at Fort Montgomery.	Feet above tide.
Elevation of reference point on scarp wall of Fort Montgomery [a]	94.998
Elevation of gage zero	93.501
Assumed high water, Lake Champlain	102.611
Assumed low water, Lake Champlain	93.361

[a] United States Deep Waterways report, part 1, p. 429.

The range of rise and fall of the lake is thus seen to be 9.25 feet, representing an available storage volume of about six inches on the entire catchment area above the outlet.

The land drainage area above Rouses Point is 7,432 square miles. The water-surface of the lake is 436 square miles, making the total area at the foot of the lake 7,868 square miles.

The daily discharge of the lake has been determined from observations of the depth and discharge over the Chambly dam, thirty-five miles below the head of Richelieu river, made in 1898 by the United States Board on Deep Waterways. A rating table has been derived from the observations at the Chambly dam and the gage readings taken at Rouses Point. The area tributary to the river between Rouses Point and Chambly is 310 square miles, making the total drainage basin above Chambly, 8,177 square miles. The publication of discharge estimates at this station for the years 1907–12 has been withheld, pending the acquisition of additional data to check and if necessary revise the rating table heretofore used.

Mean Daily Gage Height, in Feet, of Richelieu River at Fort Montgomery, Rouses Point, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1911.												
1	93.90	94.30	94.20	95.30	98.60	96.25	94.55	93.60	93.05	93.00	[illegible]	[illegible]
2	93.95	*a*	94.15	95.30	98.50	96.05	94.55	93.60	93.20	92.90	[illegible]	93.90
3	93.95	94.40	94.10	95.35	98.50	96.00	94.50	93.65	92.95	92.95	93.45	93.80
4	94.05	94.45	94.10	95.30	98.60	95.95	94.45	93.60	92.95	93.45	93.50	93.90
5	94.35	94.35	94.05	95.40	98.65	95.90	94.40	93.50	93.00	92.95	93.45	94.00
6	94.25	94.40	94.05	95.45	98.50	95.80	94.50	93.45	93.15	92.85	93.45	93.90
7	94.35	94.40	94.10	95.80	98.35	95.70	94.25	93.45	92.95	92.95	93.50	93.90
8	94.45	94.35	94.05	96.30	98.35	95.65	94.30	93.60	92.95	93.15	93.40	93.85
9	94.40	94.35	94.10	96.40	98.20	95.55	94.25	93.40	93.20	93.05	93.40	94.00
10	94.45	94.30	94.05	96.65	98.05	95.50	94.30	93.35	93.00	93.05	93.70	94.00
11	94.60	94.30	94.00	97.00	98.05	95.50	94.15	93.25	93.00	93.10	93.50	94.15
12	94.35	94.35	94.05	97.20	98.00	95.65	94.15	93.25	92.90	93.05	93.90	93.95
13	94.50	94.30	94.00	97.30	97.80	95.60	94.05	93.30	92.90	93.00	93.45	94.05
14	94.45	94.25	94.05	*a*	97.80	95.45	94.10	93.25	92.95	93.05	93.50	94.25
15	94.40	94.35	94.05	*a*	97.90	95.40	94.00	93.25	93.40	93.10	93.50	94.45
16	94.45	94.25	94.10	*a*	97.50	95.30	94.15	93.15	93.00	93.00	93.40	94.45
17	94.40	94.30	94.15	*a*	97.50	95.25	94.10	93.15	92.90	93.10	93.50	94.55
18	94.50	94.25	94.20	*a*	97.40	95.30	93.90	93.25	92.95	93.20	93.40	94.65
19	94.55	94.30	94.25	98.15	97.30	95.25	93.90	93.10	93.00	93.15	93.65	94.70
20	94.40	94.25	94.25	98.25	97.40	95.15	94.00	93.10	92.90	93.20	93.60	94.80
21	94.45	94.20	94.25	98.30	97.20	95.05	93.90	93.20	92.95	93.30	93.55	94.75
22	94.35	94.20	94.20	98.35	97.00	95.10	93.80	93.40	92.95	93.35	93.60	95.00
23	94.35	94.25	94.25	98.30	96.90	94.90	93.75	92.95	93.00	93.35	93.90	94.80
24	94.35	94.20	94.25	98.30	97.00	94.90	93.95	93.15	93.15	93.45	93.65	95.00
25	94.30	94.25	94.30	98.20	96.70	95.00	93.95	93.10	92.90	93.50	93.60	95.20
26	94.30	94.25	94.35	98.25	96.70	94.90	93.70	93.15	92.95	93.40	93.70	95.25
27	94.30	94.20	94.50	98.30	96.60	94.95	93.65	93.15	93.20	93.50	93.70	95.70
28	94.25	94.20	94.65	98.25	96.60	94.80	93.60	93.20	92.90	93.50	93.90	95.20
29	94.45	......	94.85	98.35	96.40	94.60	93.75	93.00	93.00	93.65	94.00	95.30
30	94.30	......	95.05	98.40	96.30	94.60	93.65	93.00	92.90	93.30	93.90	95.25
31	94.30	......	95.20	......	96.20	......	93.60	93.05	......	93.45	......	95.30

a Record missing.

NOTE.— This table is revised and supersedes that for 1911, published on page 18 of the State Engineer's report for 1911, Vol. II.

Mean Daily Gage Height, in Feet, of Richelieu River at Fort Montgomery, Rouses Point, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	95.20	94.50	94.20	95.75	99.40	98.50	96.20	94.45	93.90	94.25	95.20	95.50
2	95.25	94.50	94.20	95.90	99.30	98.70	96.00	94.50	93.90	94.20	94.75	96.00
3	95.20	94.40	94.15	96.20	99.15	98.80	96.10	94.30	93.80	94.45	94.75	95.30
4	95.20	94.40	94.15	96.30	99.00	98.80	96.00	94.35	93.75	94.25	95.10	95.60
5	95.15	94.40	94.10	96.40	98.90	98.70	95.95	94.30	93.80	94.50	94.80	95.50
6	95.10	94.40	94.15	96.50	99.00	98.80	95.90	94.40	93.70	94.25	94.90	95.70
7	95.10	94.45	94.10	97.00	98.70	98.50	95.85	94.35	93.90	94.40	94.80	95.50
8	95.10	94.35	94.05	97.70	98.60	98.70	95.75	94.40	93.80	94.20	95.00	95.80
9	95.10	94.40	94.10	98.35	98.40	98.30	95.60	94.50	93.70	94.30	95.20	95.60
10	95.00	94.30	94.05	98.60	93.30	98.40	95.60	94.50	93.90	94.10	95.35	95.90
11	94.95	94.30	94.10	98.75	98.40	98.20	95.50	94.20	93.80	94.15	95.55	95.50
12	94.95	94.25	94.10	98.80	98.30	98.30	95.50	94.25	93.80	94.45	95.60	95.50
13	94.95	94.30	94.05	98.80	98.30	97.90	95.50	94.20	93.90	94.15	95.50	95.60
14	95.00	94.30	94.15	98.85	98.00	98.00	95.40	94.25	94.05	94.10	95.70	95.65
15	94.80	94.25	94.15	98.95	98.00	98.05	95.40	94.05	93.85	94.00	95.65	95.50
16	94.80	94.20	94.25	98.95	97.90	97.90	95.10	94.05	93.80	94.10	95.70	95.40
17	94.80	94.20	94.30	99.20	97.90	97.55	95.20	94.00	94.00	94.25	95.90	95.30
18	94.80	94.20	94.40	99.50	98.00	97.50	95.10	94.15	94.05	94.15	95.80	95.30
19	94.70	94.20	94.50	99.60	97.80	97.30	95.00	94.05	94.00	94.40	96.00	95.30
20	94.80	94.25	94.60	99.70	97.90	97.40	95.05	93.90	94.10	93.90	95.80	95.25
21	94.75	94.15	94.80	99.80	97.80	97.20	95.20	94.00	94.15	93.95	96.00	95.35
22	94.60	94.25	94.95	100.00	97.95	97.10	94.80	94.10	94.40	94.20	95.70	95.30
23	94.60	94.15	95.00	99.70	98.70	97.05	94.70	93.90	94.50	94.00	95.70	95.35
24	94.60	94.20	95.00	99.90	98.20	96.90	94.70	93.85	94.35	93.95	95.70	95.35
25	91.60	94.10	95.00	99.90	98.00	96.80	94.70	93.80	94.25	94.25	95.50	95.40
26	94.55	94.10	95.10	100.05	98.10	96.60	94.60	93.90	94.30	94.60	95.80	95.40
27	94.60	94.20	95.15	100.25	98.10	96.55	94.60	93.75	94.30	94.70	95.80	95.25
28	94.55	94.20	95.00	99.60	98.10	96.60	94.55	93.85	94.25	94.65	95.60	*a*
29	94.55	94.20	95.20	99.60	97.50	96.30	94.50	93.70	94.20	94.90	95.70	*a*
30	94.50	......	95.35	99.50	97.90	96.20	94.50	93.75	94.25	94.80	95.60	*a*
31	94.50	......	95.60	......	98.10	......	94.50	93.80	......	94.80	......	*a*

a Lake closed.

SARANAC RIVER.

DESCRIPTION.

Saranac river rises in southeastern Franklin county, and flows northeastward to a point near Cadyville and thence eastward into Lake Champlain at Plattsburg. The southern boundary of the basin is the Ampersand mountain range, and the stream drains the north slope of the most elevated region of the state of New York. About 16.2 per cent of the upper drainage area is water-surface. The areas tributary to the river are shown in the following table:

Drainage Areas of Saranac River.a

LOCATION.	Area.	Total area.
	Square miles.	*Square miles.*
Above Saranac lake State dam	....	157.50
Above Saranac Lake village	41.90	202.40
Above Franklin Falls	104.30	306.70
North branch, Saranac river	136.60	136.60
At junction, North branch	....	498.80
Above High Falls	19.60	518.40
Above Cadyville	74.60	593.00
Above Kent Falls	2.90	595.90
Above Morrisonville	2.00	597.90
Above Lozier dam	26.10	624.00
Above mouth	5.60	629.60

a From Bien's Atlas of New York.

The results of gagings of Saranac river at a station formerly maintained at Saranac lake are given in the report of the State Engineer and Surveyor for 1903, supplement, pages 71–74.

In 1854 a timber dam was built below lower Saranac lake for the purpose of flooding logs. In 1899-1901 a masonry dam and lock were erected by the State at this point.

SARANAC RIVER NEAR PLATTSBURG, N. Y.

A gaging station was established by Robert E. Horton at the dam of the Plattsburg Light, Heat and Power Company, six miles above Plattsburg, March 17, 1903. This station is maintained by the U. S. Geological Survey in coöperation with this Department.

The record includes the flow over a straight spillway crest 171.25 feet in length, the discharge through two five-foot waste gates when open, and the discharge through five thirty-three-inch Victor turbines controlled by automatic governors. The gages were read and the record furnished by A. E. Hare until January, 1907; since then the record has been furnished by the company. Experiments were made at Cornell University hydraulic laboratory on a model of the ogee section of the dam, from which coefficients have been derived from the calculation of the discharge.*a*

Current-meter measurements have been made in the tail-race to calibrate the turbines.

Discharge records at this station for 1912 are not available at present.

AUSABLE RIVER.

DESCRIPTION.

Ausable river rises in the Adirondack mountains in the northwestern part of Essex county and flows northeasterly into Lake Champlain near Fort Kent. This stream drains a rugged, mountainous area, nearly all forest covered. Two main branches unite at Ausable Forks, about 20 miles from the mouth of the stream along river. In this twenty miles a total descent of 460 feet occurs, a portion of which is in the famous Ausable chasm.

The east branch of the Ausable river drains a long, narrow basin, extending northeasterly and southwesterly. There are few lakes, aside from Ausable lakes, which are at the head of the stream. Tributaries are numerous.

The west branch of Ausable river receives the outflow from Lake Placid at elevation 1,864 feet. Numerous smaller lakes feed this branch of the river. Its drainage basin occupies a plateau at a general elevation of 800 to 1,200 feet, the mountainous boundaries of the watershed rising to altitudes of 3,000 to 5,000 feet.

Drainage Areas of Au Sable River. [a]

LOCATION.	AREA.	
	Place to place.	Total.
	Square miles.	*Square miles.*
Lake Placid, water-surface	....	3.80
Lake Placid, drainage area	21.80	21.80
West branch from foot of Lake Placid to junction with east branch	211.20	233.00
East branch above forks	196.90	429.90
Above gaging station	40.10	470.00
Gaging station to Keeseville	6.10	476.10
Keeseville to Birmingham	27.40	503.50
Birmingham to mouth	17.80	521.30

[a] From Willsboro, Ausable, Lake Placid, Mount Marcy, and Elizabethtown sheets of the United States Geological Survey topographic atlas.

AUSABLE RIVER AT AUSABLE FORKS, N. Y.

This station is located in the village of Ausable Forks, N. Y., immediately below the junction of the east and west branches of the stream and about 15 miles above the mouth. The drainage area at this point is 487 square miles.

A chain gage is located about 100 feet below the junction of the two branches of the river and current-meter measurements are made at a cable station located about one and one-half miles farther downstream.

This station is maintained by the U. S. Geological Survey in coöperation with the State Conservation Commission.

Mean Daily Gage Height, in Feet, of Ausable River at Ausable Forks, N. Y.

DAY.	Aug.	Sept.	Oct.	Nov.	Dec.
1910.					
1	......	3.60	3.66	3.78	3.72
2	......	3.60	3.66	3.72	3.72
3	......	3.61	3.83	3.76	3.68
4	......	3.68	3.74	3.87	3.70
5	......	3.82	3.74	4.08	3.73
6	......	4.38	3.78	4.22	3.73
7	......	4.09	3.96	4.12	3.86
8	......	3.66	3.90	3.82	3.80
9	......	3.66	3.80	3.74	3.72
10	......	3.72	3.83	3.82	3.83
11	......	3.56	3.93	3.82	3.73
12	......	3.72	3.82	3.90	3.86
13	......	3.62	3.72	3.78	3.87
14	......	3.62	3.74	3.77	3.96
15	......	3.60	3.68	3.76	4.02
16	......	3.61	3.62	3.83	3.97
17	3.76	3.64	3.62	3.72	3.90
18	3.67	3.61	3.66	3.70	3.88
19	3.74	3.62	3.62	3.80	4.02
20	3.68	3.59	3.64	3.69	3.90
21	3.64	3.61	3.61	3.84	3.77
22	3.61	3.60	3.62	3.80	3.88
23	3.62	3.62	3.64	3.76	3.86
24	3.62	3.60	3.68	3.73	3.82
25	3.62	3.56	3.72	3.77	3.88
26	3.62	3.58	3.66	3.74	4.12
27	3.59	3.70	3.80	3.68	3.84
28	3.59	3.69	4.41	3.74	3.74
29	3.62	3.67	4.13	3.68	3.78
30	3.58	3.70	3.80	3.73	3.78
31	3.56	......	3.76	......	4.14

Mean Daily Gage Height, in Feet, of Ausable River at Ausable Forks, N. Y.

DAY.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1911.											
1	......	3.82	3.90	5.70	3.87	3.69	3.52	3.61	3.64	3.70	3.98
2	......	3.65	3.97	7.10	4.01	3.59	3.53	3.57	3.72	3.77	3.89
3	......	3.92	3.99	5.15	3.87	3.67	3.53	3.57	3.68	3.78	3.76
4	......	3.63	4.03	4.70	3.79	3.60	3.54	3.57	3.70	3.76	3.84
5	......	3.65	3.84	4.35	3.81	3.58	3.50	3.58	4.35	3.63	3.78
6	......	3.76	5.05	4.25	3.71	3.58	3.49	4.00	4.16	3.67	3.76
7	......	3.88	5.90	4.30	3.77	3.60	3.56	4.18	3.94	3.77	3.70
8	......	3.66	5.00	4.65	3.67	3.57	3.58	3.84	3.75	4.13	3.71
9	......	3.65	4.27	4.80	3.88	3.53	3.60	3.63	3.78	4.00	3.75
10	......	3.62	4.33	4.80	3.94	3.57	3.55	3.64	3.76	3.88	3.65
11	......	3.63	4.29	4.65	3.91	3.56	3.56	3.62	3.76	3.88	3.99
12	......	3.66	4.30	4.75	3.99	3.52	3.51	3.64	3.69	3.95	4.70
13	......	3.92	4.48	4.55	4.50	3.56	3.52	3.66	3.64	4.43	5.70
14	......	3.86	5.10	4.14	4.31	3.48	3.53	3.62	3.63	4.07	4.85
15	......	3.90	5.60	4.09	4.17	3.48	3.52	3.62	3.64	3.91	4.44
16	......	4.02	5.00	3.93	4.23	3.54	3.56	3.67	3.63	3.82	4.18
17	......	3.98	4.60	4.47	4.15	3.56	3.52	3.61	3.58	3.80	4.15
18	......	3.72	4.45	3.94	3.95	3.61	3.50	3.70	3.69	3.84	4.05
19	......	3.64	4.28	4.09	3.83	3.70	3.48	3.62	4.36	3.86	3.88
20	......	3.68	4.38	4.07	3.79	3.62	3.54	3.62	4.19	3.80	4.14
21	......	3.73	4.34	3.91	3.76	3.56	3.66	3.56	4.05	3.78	3.99
22	......	3.70	4.28	3.97	3.73	3.56	3.53	3.66	4.10	3.72	3.80
23	......	3.82	4.28	3.92	3.71	3.49	3.56	3.62	4.20	3.68	4.55
24	......	4.70	4.22	4.03	3.75	3.53	3.55	3.58	4.06	3.74	4.70
25	3.63	3.91	4.44	4.11	3.55	3.54	3.62	3.72	3.92	3.76	4.28
26	3.66	4.18	4.75	4.09	3.85	3.60	3.55	3.64	3.82	3.51	4.14
27	3.92	4.46	4.95	3.95	3.69	3.79	3.54	3.68	3.78	3.65	3.97
28	4.07	4.85	5.35	3.83	3.66	3.55	3.56	3.62	3.77	3.69	3.92
29	......	4.36	5.60	3.83	......	3.55	3.64	3.64	3.66	4.02	4.22
30	......	4.14	5.60	3.72	......	3.55	3.68	3.68	3.66	4.02	4.70
31	......	3.98	......	3.69	......	3.60	3.63	......	3.69	......	4.70

Mean Daily Gage Height, in Feet, of Ausable River at Ausable Forks, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	4.30	3.60	3.68	4.56	4.08	4.85	3.56	3.56	3.68	4.32	3.94	3.86
2	4.34	3.60	3.65	4.34	4.24	4.50	3.33	3.56	3.96	4.14	4.22	3.91
3	4.28	3.64	3.66	4.04	4.16	4.36	3.54	3.62	3.98	3.98	4.00	4.75
4	4.14	3.60	3.67	3.98	4.14	4.28	3.43	3.64	3.84	3.92	3.95	4.45
5	4.06	3.74	3.66	4.41	4.04	4.19	4.06	3.68	3.84	3.80	3.90	4.26
6	3.95	3.59	3.64	5.70	4.35	4.07	3.68	3.69	4.04	3.82	3.90	4.44
7	3.82	3.58	3.68	7.20	4.60	4.05	3.68	3.66	4.04	3.78	3.92	4.65
8	3.96	3.60	3.63	6.30	4.70	3.98	3.67	3.64	3.98	3.72	5.90	4.30
9	3.88	3.72	3.66	4.90	4.55	3.90	3.64	3.62	3.84	3.64	5.00	4.05
10	3.94	3.68	3.65	4.60	4.40	3.88	3.60	3.61	3.72	3.72	4.60	4.12
11	3.96	3.60	3.57	4.40	4.21	3.84	3.72	3.63	3.82	3.77	4.10	4.04
12	4.11	3.64	3.58	4.30	4.26	3.82	3.75	4.00	3.84	3.76	4.00	3.93
13	4.02	3.60	3.62	4.34	4.60	3.80	3.58	3.99	3.76	4.34	4.28	3.97
14	4.00	3.57	3.59	4.34	4.70	3.78	3.64	3.76	3.70	4.08	4.55	3.96
15	3.78	3.56	3.60	5.25	4.35	3.82	3.73	3.72	3.61	4.00	4.75	3.86
16	3.86	3.56	3.66	6.60	4.20	3.82	3.64	3.72	4.02	3.94	4.60	3.87
17	3.86	3.58	3.92	5.90	4.90	3.70	3.61	3.68	4.14	3.82	4.28	3.97
18	3.82	3.53	4.08	4.80	4.75	3.75	3.60	3.58	3.92	3.81	4.20	3.98
19	3.72	3.60	4.17	5.40	4.45	3.72	3.59	3.63	4.41	3.84	4.01	4.25
20	3.67	3.56	4.44	4.90	4.34	3.74	3.58	3.63	4.70	3.93	4.01	3.80
21	3.61	3.60	4.22	4.60	6.10	3.67	3.33	3.57	4.60	3.82	4.00	3.18
22	3.71	3.60	4.04	4.60	5.90	3.71	3.77	3.57	4.40	3.74	3.95	3.14
23	3.64	3.88	3.86	6.20	5.10	3.68	3.78	3.56	4.08	3.79	3.96	4.02
24	3.60	3.64	3.70	5.05	4.65	3.63	3.71	3.54	4.18	4.38	3.95	4.12
25	3.66	3.62	3.72	4.70	4.70	3.60	3.66	3.58	4.03	6.00	3.99	4.18
26	3.70	3.70	3.76	4.40	4.60	3.58	3.62	3.66	4.01	4.95	3.96	4.15
27	3.70	3.64	3.68	4.60	4.26	3.64	3.53	3.96	3.89	4.60	3.94	4.08
28	3.64	3.60	3.74	4.70	4.26	3.56	3.54	3.99	3.88	4.35	3.92	3.92
29	3.81	3.64	4.24	4.40	4.70	3.56	3.58	3.88	3.94	4.16	3.91	3.84
30	3.75	......	4.31	4.20	5.70	3.54	3.62	3.82	4.60	4.00	3.88	3.80
31	3.70	......	4.32	......	5.20	......	3.56	3.72	......	3.98	......	3.82

NOTE.— Daily gage heights for 1910 and 1911 were published in the first annual report of the Conservation Commission. Relation of gage height to discharge was affected by ice, February 25 to about March 23, 1911, and January 6 to March 15, 1912. There may have been some ice effect during the latter part of December, 1910.

Current-meter Discharge Measurements of Ausable River at Ausable Forks, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Discharge.
1912.		*Feet.*	*Second-feet.*
Feb. 28 [a]	G. H. Canfield	3.62	183
April 9	Frank Weber	5.00	2,340
April 10	Frank Weber	4.55	1,430
April 17	C. C. Covert	6.02	5,270
May 13 [b]	Frank Weber	4.44	1,290
July 29	G. H. Canfield	3.59	182

[a] Made under complete ice cover at cable; river nearly open at gage and just below.

[b] A very sudden rise took place near the finish of this measurement. This makes the width seem too great.

Mean Daily Discharge, Second-feet, of Ausable River at Ausable Forks, N. Y.

DATE.	Aug.	Sept.	Oct.	Nov.	Dec.
1910.					
1	......	194	231	348	292
2	......	194	231	292	292
3	......	202	399	329	257
4	......	257	311	441	273
5	......	388	311	694	301
6	......	1,130	348	889	301
7	......	707	543	748	431
8	......	231	473	388	367
9	......	231	367	311	292
10	......	292	399	388	399
11	......	167	508	388	301
12	......	292	388	473	431
13	......	210	292	348	441
14	......	210	311	339	543
15	......	194	257	320	616
16	......	202	210	399	555
17	329	226	210	292	473
18	249	202	231	273	452
19	311	210	210	367	616
20	257	187	226	265	473
21	226	202	202	409	339
22	226	194	210	367	452
23	210	210	226	329	431
24	210	194	257	301	388
25	210	167	292	339	452
26	210	181	241	311	748
27	187	273	367	257	409
28	187	265	1,180	311	311
29	210	249	762	257	348
30	181	273	367	301	348
31	167	......	329	......	776

Mean Daily Discharge, Second-feet, of Ausable River at Ausable Forks, N. Y.

DAY.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1911.											
1	......	330	473	4,250	441	265	140	202	226	273	566
2	......	199	555	9,130	603	187	147	174	292	339	462
3	......	422	578	2,690	441	249	147	174	257	348	329
4	......	185	629	1,700	358	194	154	174	273	329	409
5	......	199	409	1,080	378	181	127	181	1,080	218	348
6	......	296	2,450	932	282	181	122	590	804	249	329
7	......	407	4,880	1,000	339	194	167	832	520	339	273
8	......	217	2,340	1,600	249	174	181	409	320	762	282
9	......	211	962	1,900	452	147	194	218	348	590	320
10	......	189	1,050	1,900	520	174	160	226	329	452	234
11	......	196	990	1,600	485	167	167	210	329	452	578
12	......	217	1,000	1,800	578	140	134	226	265	531	1,700
13	......	446	1,300	1,420	1,330	167	140	241	226	1,210	4,250
14	......	388	2,570	776	1,020	117	147	210	218	681	2,000
15	......	426	3,940	707	818	117	140	210	226	485	1,230
16	......	585	2,340	508	904	154	167	249	218	388	832
17	......	538	1,510	1,280	790	167	140	202	181	367	790
18	......	277	1,250	520	532	202	127	273	265	409	655
19	......	215	976	707	399	273	117	210	1,100	430	452
20	......	245	1,130	681	358	210	154	210	846	367	776
21	......	286	1,070	485	329	167	241	167	655	348	578
22	......	259	976	555	301	167	147	241	720	292	367
23	......	369	976	496	282	122	167	210	860	257	1,420
24	......	1,700	889	629	320	147	160	181	668	311	1,700
25	188	485	1,230	734	160	154	210	292	496	329	976
26	205	832	1,800	707	420	194	160	226	388	134	776
27	422	1,260	2,220	532	265	358	154	257	348	234	554
28	578	2,000	3,210	390	241	160	167	210	339	265	496
29	......	1,100	3,940	399	249	160	226	226	241	616	889
30	......	776	3,940	292	257	160	257	257	241	616	1,700
31	......	567	......	265	......	194	218	......	265	......	1,700

Mean Daily Discharge, Second-feet, of Ausable River at Ausable Forks, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	1,000	155	218	1,440	694	2,000	167	167	257	1,040	520	431
2.....	1,070	155	199	1,070	918	1,330	51	167	543	776	889	485
3.....	976	181	205	642	804	1,100	154	210	567	567	590	1,800
4.....	776	155	211	567	776	976	92	226	409	496	532	1,250
5.....	668	249	205	1,180	642	846	668	257	409	367	473	947
6.....	426	150	192	4,250	1,080	681	257	265	642	388	473	1,230
7.....	310	145	218	9,510	1,510	655	257	241	642	348	496	1,600
8.....	434	155	185	6,210	1,700	567	249	226	567	292	4,880	1,000
9.....	362	233	205	2,110	1,420	473	226	210	409	226	2,340	655
10.....	416	205	199	1,510	1,160	452	194	202	292	292	1,510	748
11.....	434	155	148	1,160	874	409	292	218	388	339	720	642
12.....	587	181	154	1,000	947	388	320	590	409	329	590	508
13.....	493	155	178	1,070	1,510	367	181	358	329	1,070	976	555
14.....	472	139	159	1,070	1,700	348	226	329	273	694	1,420	543
15.....	278	134	165	2,940	1,080	388	301	292	202	590	1,800	431
16.....	345	134	241	7,270	860	388	226	292	616	520	1,510	441
17.....	345	145	496	4,880	2,110	273	202	257	776	388	976	555
18.....	310	118	694	1,900	1,800	320	194	181	496	378	860	567
19.....	233	165	818	3,350	1,250	292	187	218	1,180	409	603	932
20.....	199	142	1,230	2,110	1,070	311	181	218	1,700	508	603	367
21.....	162	165	889	1,510	5,530	249	51	174	1,510	388	590	14
22.....	225	165	642	1,510	4,880	282	339	174	1,160	311	532	9
23.....	181	384	431	5,870	2,570	257	348	167	694	358	543	616
24.....	155	192	273	2,450	1,600	218	282	154	832	1,130	532	748
25.....	193	178	292	1,700	1,700	194	241	181	629	5,200	578	832
26.....	218	232	329	1,160	1,510	181	210	241	603	2,200	543	790
27.....	218	192	257	1,510	947	226	147	543	462	1,510	520	694
28.....	181	165	311	1,700	947	167	154	578	452	1,080	496	496
29.....	302	192	918	1,160	1,700	167	181	452	520	804	485	409
30.....	256	......	1,020	860	4,250	154	210	388	1,510	590	452	367
31.....	218	......	1,040	......	2,820	......	167	292	......	567	......	388

NOTE.— Daily discharge determined from a well-defined rating curve. During the period of ice effect, February 25 to March 23, 1911, and January 6 to March 15, 1912, coefficients varying from 80 per cent to 90 per cent were applied to the open-water discharge. These coefficients are based on discharge measurements, but the daily discharge for these periods can be considered only approximate.

Monthly Discharge of Ausable River at Ausable Forks, N. Y.

[Drainage area, 487 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1910.					
August 17-31	329	167	225	0.462	0.26
September	1,130	167	271	0.556	0.62
October	1,180	202	351	0.721	0.83
November	889	257	383	0.786	0.88
December	776	257	423	0.869	1.00
1911.					
March	1,700	185	510	1.05	1.21
April	4,880	473	1,720	3.53	3.94
May	9,130	265	1,340	2.75	3.17
June	1,330	160	470	0.965	1.08
July	358	117	182	0.374	0.43
August	257	117	164	0.337	0.39
September	832	167	256	0.526	0.59
October	1,100	181	437	0.897	1.03
November	1,210	134	421	0.864	0.96
December	4,250	234	902	1.85	2.13
1912.					
January	1,070	155	401	0.823	0.95
February	384	118	176	0.361	0.39
March	1,230	148	410	0.842	0.97
April	9,510	567	2,490	5.11	5.70
May	5,530	642	1,690	3.47	4.00
June	2,000	154	489	1.00	1.12
July	668	51	224	0.46	0.53
August	590	154	273	0.561	0.65
September	1,700	202	649	1.33	1.48
October	5,200	226	780	1.60	1.84
November	4,880	452	934	1.92	2.14
December	1,800	9	679	1.39	1.60

WOOD CREEK DRAINAGE BASIN.

DESCRIPTION.

Wood creek flowed originally along a tortuous course in a flat valley skirted by bold slopes, the general course being northerly from a point five miles east of Hudson river at Fort Edward. From Smiths Basin northerly, it is alternately paralleled by and canalized to form Champlain canal, so that the flow of this portion of the stream is artificially controlled.

Half Way creek, the principal tributary of Wood creek, from the west, enters at Fort Ann. This stream receives the drainage from Putnam mountain and an adjacent group of small lakes. A fall of 60 feet occurs at Kanes Falls. Wood creek is joined by Mettawee river a short distance above Whitehall. The drainage from Poultney and Castleton rivers enters the arm of Lake Champlain through which Wood creek flows below Whitehall.

WOOD CREEK BELOW DAM AT WHITEHALL, N. Y.

A gage has been maintained by this Department below the dam at Whitehall since January 22, 1905. This gage gives a record of the fluctuation in level of water in the arm of Lake Champlain into which Wood creek discharges.

The original gage, erected by Mr. D. B. LaDu, was attached to the face of the Champlain Silk Mill on the right-hand side of the stream below the dam. A new gage attached to the face of the timber docking below the dam on the left-hand side of the stream is now used. The zero mark of each gage is at elevation 73.0, Barge canal datum.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Wood Creek (b) below Dam at Whitehall, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	96.55	95.95	95.90	96.95	*a*	99.75	97.40	95.70	94.90	95.35	95.80	96.60
2.....	96.55	96.00	95.90	96.90	*a*	99.70	97.05	95.50	94.75	95.40	96.05	96.15
3.....	96.55	96.00	95.90	97.10	*a*	99.95	96.90	95.65	94.85	95.05	96.05	97.20
4.....	96.40	95.95	95.90	97.00	*a*	99.70	96.90	95.60	94.90	95.30	95.60	96.55
5.....	96.45	95.90	95.90	97.00	*a*	99.80	96.90	95.50	94.80	95.50	95.80	96.65
6.....	96.40	95.95	95.90	97.40	*a*	99.60	96.80	95.40	95.00	95.25	95.70	96.50
7.....	96.35	95.95	95.90	97.65	*a*	99.90	96.70	95.40	94.85	95.15	96.35	96.75
8.....	96.30	96.00	95.90	99.40	*a*	99.55	96.70	95.30	94.85	95.30	97.45	96.45
9.....	96.35	96.00	95.90	99.00	*a*	100.15	96.60	95.05	95.05	95.00	96.95	96.60
10.....	96.40	96.00	95.90	98.80	*a*	99.35	96.50	95.15	94.60	95.40	96.60	95.95
11.....	96.40	95.95	95.90	98.80	*a*	99.35	96.60	95.00	95.00	95.10	96.50	96.60
12.....	96.35	95.90	95.90	98.60	*a*	99.20	96.80	95.20	94.85	95.00	96.80	96.60
13.....	96.35	95.95	96.00	98.90	99.00	99.55	96.45	95.10	94.85	95.25	96.90	96.50
14.....	93.35	95.90	96.25	98.65	99.10	99.20	96.30	95.05	94.70	95.10	96.85	96.45
15.....	96.30	95.90	96.30	98.90	99.10	99.05	96.05	95.55	94.85	95.35	97.10	96.40
16.....	96.25	95.95	96.60	99.20	99.20	98.85	96.80	95.35	95.75	95.15	97.10	96.40
17.....	96.15	96.00	96.45	99.75	99.30	98.55	96.25	95.15	94.85	94.75	96.85	96.40
18.....	96.10	96.00	96.40	100.20	99.10	98.60	96.10	95.30	94.85	94.90	97.15	96.30
19.....	96.20	96.00	96.40	100.50	99.40	98.60	96.40	95.20	95.10	94.85	96.75	96.45
20.....	93.25	96.20	96.50	100.50	99.15	98.35	95.80	95.30	95.40	95.50	96.70	96.50
21.....	96.15	96.00	96.40	100.05	99.55	98.30	95.80	95.00	95.35	95.05	96.60	96.65
22.....	96.10	96.00	96.40	99.90	99.55	98.20	96.35	94.75	95.35	94.75	96.75	96.65
23.....	96.05	96.00	96.40	100.55	98.85	98.05	96.15	94.85	95.15	95.20	96.80	96.50
24.....	96.00	95.90	96.40	100.05	98.90	97.95	96.00	95.00	95.30	96.90	96.80	96.50
25.....	96.00	95.90	96.15	100.65	99.50	97.65	95.90	94.80	95.25	97.10	97.10	96.45
26.....	95.95	95.90	96.00	99.55	99.10	97.95	95.90	94.85	94.95	96.75	96.90	96.40
27.....	95.90	95.90	96.00	98.80	98.95	97.70	95.75	95.15	95.35	96.35	96.50	96.40
28.....	95.90	95.90	96.25	100.30	98.60	97.45	95.50	94.95	95.40	96.70	96.55	96.30
29.....	95.95	95.90	96.70	100.35	99.00	97.55	95.60	95.20	95.45	96.40	96.55	96.20
30.....	95.90	......	97.30	100.45	99.90	97.80	95.60	95.25	95.35	96.10	96.85	96.25
31.....	95.95	......	97.20	......	100.15	......	95.55	95.00	......	96.05	......	96.45

a No record. *b* Arm of Lake Champlain.

RAQUETTE RIVER.

DESCRIPTION.

Raquette river drains a long, narrow basin extending from northern Hamilton county to St. Lawrence river. Its sources are on an elevated plateau, dotted with mountains interspersed with lakes. The region is timbered, but numerous marsh and swamp areas exist, many of which are on the divide and feed streams flowing in opposite directions. The lakes of the head waters afford ample opportunities for storage development.

RAQUETTE RIVER AT MASSENA SPRINGS, N. Y.

A gaging station was established by Robert E. Horton at the highway bridge at Massena Springs, September 21, 1903. Observations were continued until October 17, 1903, when the station was temporarily abandoned. It was resumed April 9, 1904, and has since been maintained by the U. S. Geological Survey in coöperation with this Department.

The channel is straight for 300 feet above and 1,000 feet below the bridge, which consists of a single span of 167.5 feet. The banks are not subject to overflow. The current is swift and uniform.

Discharge measurements are made from the downstream side of the Massena Springs highway bridge. The initial point for soundings is the top of the right bridge abutment on the upstream side of the bridge.

The gage consists of a vertical scale attached to the right abutment on the upstream side of the bridge. The bench-mark is a cross painted on the outside downstream corner of the foundation adjacent to the sulphur springs; elevation above gage datum, 12.21 feet. The Sunday flow of this stream, like many others in this State, is often held back during the low-water season, while ponds at mills above are being refilled. Where there is extensive pondage of this character, the resultant effect may be shown in the stream for several days.

Mean Daily Gage Height, in Feet, of Raquette River at Massena Springs, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	8.40	4.90	4.20	7.60	8.20	9.00	1.90	1.65	1.70	3.20	3.00	4.20
2.....	......	4.70	4.00	7.40	8.00	8.00	2.25	1.66	1.60	3.10	3.00	4.00
3.....	......	......	4.00	7.00	7.60	7.40	2.25	1.75	1.80	3.00	3.20	4.00
4.....	8.40	......	4.40	5.80	7.40	6.80	1 95	1.55	1.85	3.00	3.20	4.40
5.....	......	......	4.40	7.40	7.00	6.70	1.30	1.75	2.00	2.80	3.30	5.50
6.....	......	4.40	4.40	12.80	7.00	6.70	1.80	2.10	2.35	3.00	3.40	6.10
7.....	......	......	4.40	13.60	6.80	6.40	2.00	2.10	2.60	3.00	4.20	6.00
8.....	......	......	4.40	12.40	6.70	6.10	2.50	2.05	2.60	3.10	5.90	5.80
9.....	......	......	4.40	10.00	6.60	5.80	2.10	1.95	2.60	3.00	5.80	5.80
10.....	......	......	4.20	9.00	6.50	5.80	1.65	2.10	2.60	2.60	5.60	5.60
11.....	6.80	......	4.00	8.60	6.20	5.80	1.45	1.85	2.05	3.10	5.00	5.60
12.....	......	4.60	4.00	6.90	6.00	5.20	1.75	2.05	1.75	3.20	5.00	5.40
13.....	......	......	4.40	6.60	6.00	5.20	1.65	2.35	2.00	3.10	5.40	5.20
14.....	......	......	3.60	6.60	5.80	5.00	1.60	2.10	2.80	3.00	5.80	5.20
15.....	......	......	4.00	6.80	5.60	4.60	1.85	1.95	2.60	3.00	5.80	5.30
16.....	......	......	4.40	7.30	5.60	4.60	1.85	1.30	2.60	2.90	5.70	5.50
17.....	......	4.40	5.00	8.10	5.80	4.80	1.75	1.75	2.50	2.45	5.60	6.20
18.....	......	......	4.60	9.10	6.00	4.00	1.60	1.60	2.40	2.30	5.40	7.00
19.....	6.50	4.40	5.40	9.40	6.00	4.20	1.50	1.85	2.40	2.80	4.80	6.90
20.....	......	3.80	6.00	9.00	5.80	4.00	1.45	2.00	2.60	2.90	5.00	6.80
21.....	......	3.80	6.00	8.80	6.00	3.70	1.35	1.80	2.60	2.80	4.90	6.60
22.....	......	3.80	5.80	8.80	6.40	3.60	1.25	1.85	2.80	2.80	4.80	6.60
23.....	......	3.70	5.40	8.90	6.60	3.40	2.40	1.85	2.80	2.80	4.70	6.60
24.....	......	5.00	5.40	9.40	6.50	3.20	1.80	1.95	2.90	2.60	4.60	6.50
25.....	4.90	4.80	5.20	9.40	6.70	3.00	1.75	2.90	3.00	3.40	4.80	6.40
26.....	......	4.60	4.80	9.30	6.60	2.80	1.60	2.45	3.00	3.80	4.90	6.50
27.....	......	4.50	4.80	9.10	6.50	2.80	1.55	2.15	3.00	3.40	4.80	6.40
28.....	......	4.20	4.80	8.90	6.60	2.90	2.60	1.90	3.10	3.40	4.70	6.30
29.....	......	4.20	6.00	8.60	6.90	2.80	1.70	1.45	3.20	3.30	4.60	6.40
30.....	......	......	7.00	8.40	8.00	2.60	1.70	0.70	3.20	3.20	4.40	6.40
31.....	......	......	7.00	......	10.20	......	1.90	1.45	......	3.00	......	6.20

NOTE.— On February 2 the gage was removed from the old highway bridge and installed on the upstream side of the new bridge, which was built a short distance below the old bridge. The datum of the gage in its new position was so located that the gage heights, after the change, would be, as nearly as possible, comparable with those taken at the old location. In doing this the slope in water-surface between the two locations was considered.

Relation of gage height to discharge was affected by ice, January 1 to April 8.

Current-meter Discharge Measurements of Raquette River at Massena Springs, N. Y.

DATE.	Hydrographer.	Mean gage reading.[b]	Discharge.
1912.		*Feet.*	*Second-feet.*
Feb. 1 [a]	G. H. Canfield	4.28	696
Feb. 2 [a]	Frank Weber	4.72	916
Feb. 24 [a]	Frank Weber	4.81	896
Mar. 14 [a]	C. S. De Golyer	3.64	498
April 12	Frank Weber	6.66	4,810
April 13	Frank Weber	6.64	4,610
April 19	Frank Weber	9.29	8,610
April 20	Frank Weber	9.01	8,270
May 15	Frank Weber	5.68	4,050
July 26	G. H. Canfield	1.58	395
July 27 [c]	G. H. Canfield	1.63	378
Oct. 21	J. G. Mathers	2.79	1,053
Oct. 24	J. G. Mathers	2.02	620
Oct. 25	J. G. Mathers	3.41	1,530

[a] Measurement made under complete ice cover.

[b] All gage heights refer to gage in position on new concrete bridge, except for measurement of February 1, which refers to old gage.

[c] Made by wading near site of old bridge.

Mean Daily Discharge, Second-feet, of Raquette River at Massena Springs, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	......	955	675	2,000	6,870	8,050	515	398	420	1,360	1,200	2,220
2	......	865	605	2,000	6,590	6,590	705	398	375	1,280	1,200	2,040
3	......	835	605	2,000	6,040	5,780	705	442	465	1,200	1,360	2,040
4	......	805	745	3,000	5,780	5,020	540	355	490	1,200	1,360	2,410
5	......	775	745	4,000	5,270	4,900	261	442	565	1,060	1,440	3,520
6	......	745	745	4,000	5,270	4,900	465	620	765	1,200	1,520	4,180
7	......	755	745	4,000	5,020	4,530	565	620	925	1,200	2,220	4,070
8	......	770	745	4,000	4,900	4,180	860	592	925	1,280	3,960	3,850
9	......	785	745	9,590	4,770	3,850	620	540	925	1,200	3,850	3,850
10	......	800	675	8,050	4,650	3,850	398	620	925	925	3,630	3,630
11	......	815	605	7,450	4,290	3,850	316	490	592	1,280	3,010	3,630
12	......	825	605	5,140	4,070	3,210	442	592	442	1,360	3,010	3,410
13	......	810	745	4,770	4,070	3,210	398	765	565	1,280	3,410	3,210
14	......	795	490	4,770	3,850	3,010	375	620	1,060	1,200	3,850	3,210
15	......	780	605	5,020	3,630	2,610	490	540	925	1,200	3,850	3,310
16	......	760	745	5,640	3,630	2,610	490	261	925	1,130	3,740	3,520
17	......	745	1,000	6,730	3,850	2,810	442	442	860	828	3,630	4,290
18	......	745	825	8,200	4,070	2,040	375	375	795	735	3,410	5,270
19	......	745	1,200	8,650	4,070	2,220	335	490	795	1,060	2,810	5,140
20	......	545	1,540	8,050	3,850	2,040	316	565	925	1,130	3,010	5,020
21	......	545	1,540	7,750	4,070	1,770	279	465	925	1,060	2,910	4,770
22	......	545	1,420	7,750	4,530	1,680	244	490	1,060	1,060	2,810	4,770
23	......	515	1,200	7,900	4,770	1,520	795	490	1,060	1,060	2,710	4,770
24	......	1,000	1,200	8,650	4,650	1,360	465	540	1,130	925	2,610	4,650
25	......	910	1,100	8,650	4,900	1,200	442	1,130	1,200	1,520	2,810	4,530
26	......	825	910	8,500	4,770	1,060	375	828	1,200	1,860	2,910	4,650
27	......	785	920	8,200	4,650	1,060	355	648	1,200	1,520	2,810	4,530
28	......	675	910	7,900	4,770	1,130	925	515	1,280	1,520	2,710	4,410
29	......	675	1,540	7,450	5,140	1,060	420	316	1,360	1,440	2,610	4,530
30	......	......	2,000	7,160	6,590	925	420	86	1,360	1,360	2,410	4,530
31	......	......	2,000	......	9,910	......	515	316	......	1,200	......	4,290

NOTE.— Daily discharge, April 9 to December 31, determined from a well-defined rating curve. Daily discharge, February 1 to April 8, obtained by means of a well-defined rating curve, based on measurements made under ice cover and comparison with the discharge at Piercefield.

Monthly Discharge of Raquette River at Massena Springs, N. Y.
[Drainage area, 1,170 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum	Mean.	Per square mile.	Depth in inches on drainage area.
1912.					
January	....	....	a1,500	1.28	1.48
February	1,000	515	736	0.652	0.70
March	a2,000	490	972	0.831	0.96
April	9,590	a2,000	6,230	5.32	5.94
May	9,910	3,630	4,940	4.22	4.86
June	8,050	925	3,070	2.62	2.92
July	925	244	479	0.409	0.47
August	1,130	86	516	0.441	0.51
September	1,360	375	881	0.753	0.84
October	1,860	735	1,210	1.03	1.19
November	3,960	1,200	2,760	2.36	2.63
December	5,270	2,040	3,940	3.37	3.88

a Estimated by means of comparison with the discharge at Piercefield.

RAQUETTE RIVER AT PIERCEFIELD, N. Y.

A gaging station was established August 20, 1908, by the U. S. Geological Survey in coöperation with the State Water Supply Commission at a point about one-half mile downstream from the dam of the International Paper Company at Piercefield. The gaging station is located at the head of Black rapids. There the stream is confined to a single channel at all stages and there is sufficient current to afford good opportunity for measurements in ordinary and high stages but the stream becomes sluggish in low water. Current-meter measurements are made from a boat held in position by a wire stretched across the stream, at ordinary and low stages. During high water the measurements are made at the highway bridge crossing the pond a short distance above the dam of the Paper Company. The stream was little obstructed by ice at the gaging station and the rating curve deduced for open water conditions is utilized in calculating discharge throughout the entire year. The observer is W. B. Graves. The records here published have been compiled from the reports of the New York State Conservation Commission.

Mean Daily Gage Height, in Feet, of Raquette River at Piercefield, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	7.10	4.50	4.40	4.20	10.60	7.20	4.40	3.80	2.10	3.35	5.80	6.20
2	6.90	4.60	4.30	4.30	10.50	7.00	4.20	3.50	1.40	3.60	5.80	6.30
3	6.90	4.50	1.70	4.30	10.30	7.20	4.20	2.00	3.30	4.60	4.40	6.20
4	7.10	2.25	1.85	4.30	10.40	7.20	4.20	1.55	3.90	5.10	6.00	6.20
5	6.80	4.60	4.10	4.40	9.20	7.20	4.20	3.25	4.00	5.30	5.90	6.30
6	6.60	4.60	4.20	4.30	9.10	7.20	4.30	3.80	4.00	3.10	6.00	6.30
7	6.60	4.40	4.30	3.80	9.10	7.20	2.60	3.80	4.10	4.10	6.00	6.20
8	6.40	4.40	4.30	4.20	8.80	7.10	4.20	3.80	2.70	5.70	6.00	6.00
9	5.80	4.50	4.30	4.60	8.80	6.80	3.60	3.60	3.80	5.40	6.00	6.10
10	5.20	4.40	1.60	4.60	8.80	7.20	3.40	2.75	4.30	5.20	5.50	6.20
11	5.50	2.25	1.90	4.60	8.60	6.80	4.20	1.55	4.20	5.40	6.40	6.40
12	5.80	4.60	4.00	4.90	7.80	6.80	3.10	3.50	4.10	5.20	7.20	6.20
13	5.80	4.70	4.20	4.80	7.90	6.60	2.90	3.80	4.10	3.30	7.80	6.20
14	5.80	4.60	4.30	4.80	7.80	6.60	1.88	3.80	4.20	5.60	7.20	6.10
15	5.80	4.60	4.30	5.60	7.70	6.60	2.55	3.80	2.80	5.20	7.20	5.80
16	5.80	4.50	4.30	6.00	7.60	6.20	3.70	3.40	3.80	5.40	7.20	6.20
17	5.80	4.50	1.65	6.80	7.60	6.50	3.60	2.80	4.00	5.30	6.60	6.30
18	5.40	2.00	1.75	6.80	7.40	6.30	3.60	1.65	4.10	5.60	7.40	6.30
19	4.40	4.40	4.20	7.20	7.50	6.40	1.75	3.50	4.10	5.20	7.60	6.20
20	3.80	4.50	4.20	7.50	7.40	6.20	1.50	3.80	4.20	2.90	7.80	6.30
21	3.80	4.50	4.10	7.20	7.20	6.00	1.40	3.80	4.00	5.40	7.60	6.20
22	3.80	4.50	4.10	8.10	7.30	6.00	3.45	3.80	3.40	5.40	7.40	4.70
23	3.80	4.50	4.10	8.60	7.20	4.60	3.80	3.70	3.80	5.60	7.40	4.80
24	5.00	4.50	1.70	9.00	7.20	5.50	3.80	2.75	4.10	5.30	6.20	4.80
25	5.20	1.90	2.05	9.60	7.10	6.20	3.80	1.55	4.20	5.00	6.50	4.80
26	5.20	2.05	4.10	9.70	6.40	5.80	1.85	3.30	4.20	5.20	6.60	5.50
27	5.20	4.40	4.10	10.50	6.80	5.80	1.80	3.90	4.10	3.10	6.50	5.80
28	2.75	4.40	4.10	9.80	7.20	5.50	1.55	3.80	4.20	5.60	6.60	5.80
29	5.20	4.40	4.20	10.70	7.50	5.50	3.60	3.70	2.85	5.40	6.50	5.00
30	5.30	......	4.30	11.40	7.40	2.45	3.80	3.80	4.00	5.50	6.40	5.40
31	5.40	......	4.00	......	7.30	......	3.80	3.80	......	5.40	......	5.80

NOTE.— Relation of gage height to discharge at this station was not affected by ice.

Mean Daily Gage Height, in Feet (Automatic Gage), of Raquette River at Piercefield, N. Y.

DAY.	Oct.	Nov.	Dec.
1912.			
1	......	5.67	6.16
2	......	5.82	6.32
3	......	4.73	6.36
4	......	5.87	6.40
5	......	5.96	6.45
6	......	5.89	6.46
7	......	5.92	6.78
8	......	5.91	6.23
9	......	6.23	6.60
10	......	6.40	6.49
11	......	6.96	6.47
12	......	7.01	6.44
13	......	7.03	6.42
14	......	7.09	6.15
15	......	7.19	6.16
16	......	7.18	6.30
17	......	6.99	6.21
18	......	7.33	6.20
19	......	7.25	6.15
20	......	7.12	6.14
21	......	7.13	6.10
22	5.08	6.65	5.55
23	5.35	6.88	5.68
24	5.15	6.44	5.77
25	5.04	6.85	5.46
26	5.37	6.67	5.95
27	3.66	6.60	6.00
28	4.72	6.54	5.99
29	5.46	6.43	5.07
30	5.48	6.32	5.88
31	5.56	......	5.94

Current-meter Discharge Measurements of Raquette River at Piercefield, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Discharge.
1912.		*Feet.*	*Second-feet.*
Jan. 31 *a*	Frank Weber	5.38	1,030
Feb. 20 *a*	Frank Weber	4.00	454
July 16	G. H. Canfield	3.80	424
Oct. 25 *c*	Frank Weber	5.50	1,110

a Made under complete ice cover, 1½ miles below gage.
c Made from cable.

Mean Daily Discharge, Second-feet, of Raquette River at Piercefield, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	2,200	650	615	545	6,100	2,380	615	425	96	303	1,280	1,560
2	2,110	690	580	580	5,980	2,200	515	342	44	369	1,280	1,630
3	2,110	650	64	580	5,740	2,380	545	88	290	690	615	1,560
4	2,290	110	76	580	5,860	2,380	545	54	455	895	1,420	1,560
5	2,020	690	515	615	4,430	2,380	545	278	485	990	1,350	1,630
6	1,860	690	515	580	4,320	2,380	580	425	485	244	1,420	1,630
7	1,860	615	580	425	4,320	2,380	147	425	515	515	1,420	1,560
8	1,700	615	580	545	3,980	2,290	545	425	161	1,220	1,420	1,420
9	1,280	650	580	690	3,980	2,020	369	369	425	1,040	1,420	1,490
10	940	615	57	690	3,980	2,380	316	169	580	940	1,100	1,560
11	1,100	110	80	690	3,760	2,020	515	54	545	1,040	1,700	1,700
12	1,280	690	485	810	2,950	2,020	244	342	515	940	2,380	1,560
13	1,280	730	545	770	3,050	1,860	196	425	515	290	2,470	1,560
14	1,280	690	580	770	2,950	1,860	78	425	545	1,100	2,380	1,490
15	1,280	690	580	1,160	2,850	1,860	141	425	177	940	2,380	1,280
16	1,280	650	580	1,420	2,750	1,560	397	316	425	1,040	2,380	1,560
17	1,280	650	60	2,020	2,750	1,780	369	177	485	990	1,860	1,630
18	1,040	88	68	2,020	2,560	1,630	369	60	515	1,160	2,560	1,630
19	615	615	545	2,380	2,650	1,700	68	342	515	940	2,750	1,560
20	425	650	545	2,650	2,560	1,560	50	425	545	196	2,950	1,630
21	425	650	515	2,380	2,380	1,420	44	425	485	1,040	2,750	1,560
22	425	650	515	3,250	2,470	1,420	329	425	316	1,040	2,560	730
23	425	650	515	3,760	2,380	630	425	397	425	1,160	2,560	770
24	850	650	64	4,200	2,380	1,100	425	169	515	990	1,560	770
25	940	80	92	4,900	2,290	1,560	425	54	545	850	1,780	770
26	940	92	515	5,020	1,700	1,280	76	290	545	940	1,860	1,100
27	940	615	515	5,980	2,020	1,280	72	455	515	244	1,780	1,280
28	169	615	515	5,140	2,380	1,100	54	425	545	1,160	1,860	1,280
29	940	615	545	6,220	2,650	1,100	369	397	186	1,040	1,780	850
30	990	......	580	7,060	2,560	130	425	425	485	1,100	1,700	1,040
31	1,040	......	485	......	2,470	......	425	425	......	1,040	......	1,280
Mean	1,210	557	423	2,280	3,330	1,740	332	319	429	853	1,890	1,380

NOTE.— This record deduced from gage readings taken twice daily. Daily discharge determined from a well-defined rating curve.

Mean Daily Discharge, Second-feet, of Raquette River at Piercefield, N. Y.

DAY.	Oct.	Nov.	Dec.
1912.			
1	......	1,290	1,530
2	......	1,290	1,640
3	......	740	1,670
4	......	1,330	1,700
5	......	1,390	1,740
6	......	1,340	1,750
7	......	1,360	2,000
8	......	1,360	1,580
9	......	1,580	1,860
10	......	1,700	1,770
11	......	2,160	1,760
12	......	2,210	1,730
13	......	2,230	1,720
14	......	2,280	1,520
15	......	2,370	1,530
16	......	2,360	1,630
17	......	2,190	1,570
18	......	2,500	1,560
19	......	2,420	1,520
20	......	2,310	1,520
21	......	2,320	1,490
22	886	1,900	1,130
23	1,020	2,090	1,210
24	918	1,730	1,260
25	868	2,060	1,080
26	1,020	1,920	1,380
27	386	1,860	1,420
28	738	1,810	1,410
29	1,080	1,720	882
30	1,090	1,640	1,340
31	1,140	......	1,380
Mean	915	1,850	1,520

NOTE.— This record deduced from automatic gage-readings.

Monthly Discharge of Raquette River at Piercefield, N. Y.
[Drainage area, 723 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum	Mean.	Per square mile.	Depth in inches on drainage area.
1912.					
January	2,290	169	1,210	1.67	1.92
February	730	80	557	0.769	0.83
March	615	57	423	0.585	0.67
April	7,060	425	2,280	3.15	3.51
May	6,100	1,700	3,330	4.61	5.32
June	2,380	130	1,740	2.41	2.69
July	615	44	332	0.459	0.53
August	455	54	319	0.441	0.51
September	580	44	429	0.593	0.66
October	1,220	244	853	1.18	1.36
November	2,950	615	1,890	2.61	2.91
December	1,700	730	1,380	1.91	2.20

Monthly Discharge (Automatic Gage) of Raquette River at Piercefield, N. Y.
[Drainage area, 723 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1912.					
October (10 days)	....	....	915	1.27	0.47
November	2,700	740	1,850	2.56	2.86
December	2,150	882	1,520	2.10	2.42

RAQUETTE RIVER AT RAQUETTE FALLS, NEAR COREYS, N. Y.

The gaging station was established at Raquette Falls by the U. S. Geological Survey in coöperation with the State Water Supply Commission, August 27, 1908. The gaging station is located about midlength of Raquette Falls in Harrietstown, about eight miles upstream from the village of Axton. The stream flows in one channel at all stages. The bed is of rock containing large boulders, but permanent in character. The current is sluggish at low stages of the stream, but is suitable for obtaining good gaging results at ordinary and higher stages. A cableway was erected at this station is 1909. Measurements were made, preceding the erection of the cableway, by wading at a cross-section about 2,000 feet downstream. The record is not maintained during the winter season. Tho observer is C. A. DeLancett. The results of gagings at this station have been compiled from the reports of the New York State Conservation Commission.

Mean Daily Gage-height, in Feet, of Raquette River at Raquette Falls, near Coreys, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.
1912.											
1	3.70	......	2.20	2.40	5.70	5.10	1.80	1.40	1.60	2.70	3.40
2	3.60	......	......	2.50	5.60	5.10	1.80	1.38	2.00	2.80	3.40
3	3.50	......	......	2.50	5.40	4.90	1.70	1.50	2.10	2.75	3.40
4	3.50	......	......	2.70	5.20	4.70	1.70	1.70	2.30	2.70	3.40
5	3.40	2.40	......	2.80	5.00	4.60	1.80	1.70	2.20	2.65	3.50
6	3.20	......	......	3.00	4.90	4.50	1.90	1.60	2.50	2.60	3.50
7	......	......	......	3.50	4.90	4.40	1.80	1.60	2.50	2.60	3.50
8	3.10	......	1.40	3.90	4.90	4.20	1.70	1.55	2.35	2.55	4.10
9	......	......	......	4.40	4.90	4.10	1.60	1.60	2.20	2.50	4.00
10	......	......	......	4.60	4.90	4.00	1.50	1.60	2.10	2.45	3.90
11	......	......	......	4.60	5.00	3.90	1.60	1.60	2.10	2.40	......
12	......	......	......	4.50	5.00	3.80	1.50	2.10	2.00	2.45	......
13	......	......	......	4.50	5.10	3.70	1.40	2.00	2.00	2.45	......
14	......	......	......	4.50	4.90	3.60	1.60	1.90	1.90	2.40	......
15	2.90	......	1.80	4.60	4.80	3.50	1.50	1.80	1.90	2.40	......
16	......	......	......	5.10	4.60	3.40	1.70	1.70	2.50	2.40	......
17	......	......	......	5.80	4.60	3.30	1.55	1.60	2.40	2.45	......
18	......	2.20	......	6.00	4.70	3.10	1.42	1.60	2.40	2.50	......
19	......	2.04	......	6.30	4.70	3.00	1.42	1.60	2.40	2.90	......
20	......	......	......	6.30	4.70	2.90	1.38	1.55	2.40	2.80	......
21	......	......	......	6.20	5.20	2.80	1.38	1.50	2.45	2.80	......
22	3.60	......	2.30	6.10	5.70	2.70	2.00	1.50	2.50	2.85	......
23	......	1.80	......	6.30	5.70	2.60	1.85	1.50	2.55	2.90	......
24	......	......	......	6.70	5.60	2.50	1.70	1.60	2.60	2.90	......
25	......	......	......	6.70	5.60	2.40	1.60	1.70	2.60	3.20	......
26	......	......	......	6.50	5.30	2.30	1.55	1.80	2.60	3.20	......
27	......	......	......	6.50	5.30	2.20	1.50	2.15	2.60	3.30	......
28	3.30	......	......	6.00	5.10	2.10	1.42	2.10	2.65	3.30	......
29	......	......	2.40	6.00	4.90	2.00	1.50	2.00	2.60	3.30	......
30	......	......	......	5.80	5.20	1.90	1.45	1.90	2.60	3.35	......
31	......	......	......	......	5.10	......	1.41	1.70	......	3.35	......

NOTE.— Relation of gage height to discharge was affected by ice, January 7 to March 18. On account of the relatively high velocities at this station, the ice effect was not great.
A log jam caused backwater at the gage, May 6 to 25.

Current-meter Discharge Measurements of Raquette River at Raquette Falls, near Coreys, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Discharge.
1912.		*Feet.*	*Second-feet.*
Feb. 19 *a*	Frank Weber	2.04	251
April 16	Frank Weber	5.25	2,560
April 17	Frank Weber	5.75	3,400
April 25	Frank Weber	6.55	4,260
May 18 *b*	Frank Weber	4.87	1,850
May 19	Frank Weber	4.68	1,680
July 18	G. H. Canfield	1.42	124
July 18	G. H. Canfield	1.42	130
July 18 *c*	G. H. Canfield	1.41	125
Sept. 12	Frank Weber	2.11	280
Sept. 12	Frank Weber	2.11	286

a Measurement made under complete ice cover.
b Log jam below gage.
c Wading measurement, two miles below gage.

Mean Daily Discharge, Second-feet, of Raquette River at Raquette Falls, near Coreys, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.
1912.											
1	1,200	530	295	372	3,240	2,440	202	123	159	484	854
2	1,120	490	270	407	3,100	2,440	202	120	252	528	854
3	1,040	450	245	407	2,820	2,200	180	140	280	506	854
4	1,040	400	220	484	2,560	1,960	180	180	339	484	854
5	970	355	195	528	2,320	1,850	202	180	309	464	920
6	830	350	170	626	1,880	1,750	226	159	407	444	920
7	800	345	145	920	1,880	1,650	202	159	407	444	920
8	770	340	115	1,220	1,880	1,470	180	150	356	426	1,380
9	740	335	125	1,650	1,880	1,380	159	159	309	407	1,300
10	700	330	140	1,850	1,880	1,300	140	159	280	390	1,220
11	670	325	150	1,850	2,000	1,220	159	159	280	372	......
12	630	320	160	1,750	2,000	1,140	140	280	252	390	......
13	600	315	170	1,750	2,100	1,060	123	252	252	390	......
14	560	310	180	1,750	1,880	990	159	226	226	372	......
15	530	305	190	1,850	1,780	920	140	202	226	372	......
16	570	300	210	2,440	1,600	854	180	180	407	372	......
17	610	295	230	3,380	1,600	792	150	159	372	390	......
18	650	295	250	3,660	1,690	678	126	159	372	407	......
19	690	251	270	4,100	1,690	626	126	159	372	576	......
20	740	235	290	4,100	1,690	576	120	150	372	528	......
21	780	220	315	3,940	2,200	528	120	140	390	528	......
22	820	205	339	3,800	2,800	484	252	140	407	552	......
23	800	190	343	4,100	2,800	444	214	140	426	576	......
24	780	205	348	4,740	2,670	407	180	159	444	576	......
25	760	220	352	4,740	2,670	372	159	180	444	734	......
26	740	235	357	4,420	2,680	339	150	202	444	734	......
27	720	250	362	4,420	2,680	309	140	294	444	792	......
28	690	265	367	3,660	2,440	280	126	280	464	792	......
29	650	280	372	3,660	2,200	252	140	252	444	792	......
30	610	......	372	3,380	2,560	226	132	226	444	823	......
31	570	......	372	......	2,440	......	125	180	......	823	......

NOTE.— Daily discharge, January 1 to 6, determined from a well-defined rating curve. Daily discharge, March 19 to May 5 and May 26 to December 31, determined from a fairly well-defined rating curve. Daily discharge, May 6 to 25, determined from a rating curve based on two measurements made while the log jam existed. Daily discharge during the period of ice effect, January 7 to March 18, estimated by means of a rating curve based on one measurement made with ice present and the shape of the open-water rating curve. Daily discharge interpolated for days when gage was not read.

Monthly Discharge of Raquette River at Raquette Falls, near Coreys, N. Y.
[Drainage area, 418 square miles.]

MONTH.	Discharge in Second-feet.				Run-off.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1912.					
January	1,200	530	754	1.80	2.08
February	530	190	308	0.737	0.79
March	372	115	255	0.61	0.70
April	4,740	372	2,530	6.05	6.75
May	3,240	1,600	2,250	5.38	6.20
June	2,440	226	1,030	2.46	2.74
July	252	120	162	0.388	0.45
August	294	120	182	0.435	0.50
September	464	159	353	0.844	0.94
October	823	372	531	1.27	1.46
November 1-10	1,380	854	1,010	2.42	0.90

BOG RIVER.

DESCRIPTION.

Bog river is a tributary of Raquette river, which enters the head of Tupper lake. Upper Raquette river enters the easterly arm of Tupper lake. The water-level in Tupper lake is controlled to some extent by the dam of the International Paper Company at Piercefield. The drainage basin of Bog river is shown in part on the Tupper lake quadrangle of the U. S. Geological Survey topographic map. Bog river joins the outlet of Little Tupper lake and Round lake about one and one-half miles upstream from the head of Tupper lake. The drainage basin is all at high altitude, the elevation of Tupper lake being about 1,542 feet and that of Little Tupper lake, 1,718 feet. Bog river is a relatively sluggish, winding stream. Its drainage basin above the junction of Little Tupper lake outlet contains numerous small lakes and ponds. Substantially the entire drainage tributary to Bog river is forest covered, excepting lakes and marsh areas.

BOG RIVER NEAR TUPPER LAKE, N. Y.

A gaging station was established by the U. S. Geological Survey in coöperation with the New York State Water Supply Commission on Bog river below the inflow of Little Tupper lake outlet, August 24, 1908. The gage is located about one mile upstream from the head of Tupper lake. A cableway was erected at the gaging station for the purpose of making discharge measurements during the summer of 1909. Previous measurements were made by wading. The stream is confined to a single channel at all stages. Gage readings were not taken each day during 1909, but were taken at frequent intervals by engineers and observers. The regimen of the stream is controlled to some extent by power development above the gaging station. The results here given have been compiled from the reports of the New York State Conservation Commission.

Mean Daily Gage Height, in Feet, of Bog River near Tupper Lake, N. Y.

DAY.	April.	May.	June.
1912.			
1	2.4	4.0	3.5
2	2.4	3.6	3.4
3	2.4	3.2	3.4
4	2.5	3.0	3.4
5	2.6	2.8	3.4
6	2.6	2.8	3.4
7	2.6	2.7	3.3
8	2.6	2.6	3.0
9	2.5	2.6	2.8
10	2.6	2.5	2.6
11	2.6	2.4	2.5
12	2.6	2.5	2.4
13	2.6	2.5	2.4
14	2.8	2.5	2.3
15	2.9	2.4	2.1
16	3.5	2.4	2.0
17	4.5	2.5	1.9
18	4.6	2.6	1.8
19	4.6	2.6	1.7
20	4.5	2.7	1.6
21	4.4	2.8	1.6
22	4.6	3.1	1.5
23	4.6	3.6	1.5
24	4.6	3.5	1.5
25	4.6	3.4	1.5
26	4.6	3.3	1.4
27	4.6	3.3	1.4
28	4.6	3.3	1.3
29	4.5	3.5	1.3
30	4.2	3.7	1.3
31	......	3.7	......

Note.— The relation of gage height to discharge was probably affected by ice from March 22 to 31.

Current-meter Discharge Measurements of Bog River near Tupper Lake, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Discharge.
1912.		*Feet.*	*Second-feet.*
May 17	Frank Weber	2.52	331
May 17	Frank Weber	2.57	336

Mean Daily Discharge, Second-feet, of Bog River near Tupper Lake, N. Y.

DAY.	Mar.	April.	May.	June.
1912.				
1	......	285	940	700
2	......	285	745	655
3	......	285	570	655
4	......	315	490	655
5	......	350	420	655
6	......	350	420	655
7	......	350	385	610
8	......	350	350	490
9	......	315	350	420
10	......	350	315	350
11	......	350	285	315
12	......	350	315	285
13	......	350	315	285
14	......	420	315	255
15	......	455	285	205
16	......	700	285	180
17	......	1,190	315	160
18	......	1,240	350	140
19	......	1,240	350	120
20	......	1,190	385	105
21	......	1,140	420	105
22	230	1,240	530	90
23	230	1,240	745	90
24	230	1,240	700	90
25	230	1,240	655	90
26	240	1,240	610	75
27	250	1,240	610	75
28	255	1,240	610	60
29	255	1,190	700	60
30	255	1,040	790	60
31	255	......	790	......

NOTE.— Daily discharge determined from a fairly well-defined rating curve.

Monthly Discharge of Bog River near Tupper Lake, N. Y.
[Drainage area, 132 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1912.					
April	1,240	285	759	5.75	6.42
May	940	285	495	3.75	4.32
June	700	60	290	2.20	2.46

OSWEGATCHIE RIVER.

DESCRIPTION.

Oswegatchie river has its source in the region of lakes and timbered swamps in the southern part of St. Lawrence county. The largest of the lakes is Cranberry lake, which affords valuable storage to water-power users on its outlet, East branch of Oswegatchie river. East and west branches flow in a general northwesterly direction and unite near Talcville. From Gouverneur to Oxbow the river flows southwestward; it then turns sharply and flows northeastward to Rensselaer Falls, turns again to the northwest, receives the outlet of Black lake at Galilee, and finally enters the St. Lawrence at Ogdensburg.

OSWEGATCHIE RIVER NEAR OGDENSBURG, N. Y.

The gaging station was established May 16, 1903, by Robert E. Horton. It is located at Eel weir bridge, just below the junction of Oswegatchie river and Black lake outlet. This gaging station is maintained by the U. S. Geological Survey in coöperation with this Department.

The channel is in rock and is partly artificial, rock underneath the bridge having been removed by blasting to increase the bridge opening. The bridge consists of two spans, the right being 129.6 feet long and the left 130.1 feet.

Discharge measurements are made from the downstream side of the bridge. The initial point for soundings is the top of the face of the right abutment, downstream side.

A standard chain gage, which is observed twice daily by Joseph H. La Rue is attached to the ironwork of the bridge on the upstream side of the right-hand span. The bench-mark is a square chisel draft on the upstream side of the right-hand abutment; for which an arbitrary elevation of 100.0 is assumed. The datum of the gage is elevation 83.28, or 16.72 feet below the bench-mark.

Mean Daily Gage Height, in Feet, of Oswegatchie River near Ogdensburg, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	6.40	4.90	4.90	7.20	6.50	8.10	5.00	4.60	4.80	5.40	6.00	6.10
2.....	6.20	4.80	4.90	7.50	6.40	8.40	5.00	4.60	4.80	5.50	5.90	6.10
3.....	6.00	4.80	4.90	7.60	6.30	8.70	5.00	4.60	4.85	5.40	5.80	6.20
4.....	5.90	4.80	4.80	7.70	6.20	8.60	5.00	4.60	4.90	5.40	5.80	7.20
5.....	5.80	4.80	4.80	7.80	6.00	8.40	4.90	4.60	4.90	5.40	5.80	7.60
6.....	5.70	4.80	4.80	8.20	5.85	8.40	4.80	4.60	4.90	5.45	5.70	7.90
7.....	5.70	4.80	4.80	8.70	5.80	8.00	4.80	4.60	4.90	5.40	5.70	7.70
8.....	5.60	4.80	4.80	9.60	5.80	7.60	4.80	4.60	5.00	5.30	5.90	7.60
9.....	5.60	4.80	4.80	9.80	5.75	7.20	4.80	4.70	5.00	5.30	6.20	7.60
10.....	5.50	4.80	4.70	9.90	5.65	7.00	4.70	4.70	5.00	5.30	6.60	7.60
11.....	5.50	4.80	4.70	9.80	5.60	6.80	4.70	4.70	5.00	5.30	6.80	7.40
12.....	5.50	4.80	4.70	9.60	5.40	6.70	4.70	4.70	5.00	5.20	6.90	7.10
13.....	5.40	4.70	4.70	9.20	5.50	6.60	4.60	4.70	5.00	5.20	6.90	7.00
14.....	5.30	4.70	4.70	9.00	5.55	6.20	4.60	4.65	5.00	5.20	7.10	6.90
15.....	5.30	4.70	4.70	8.80	5.40	6.10	4.60	4.60	4.90	5.20	7.20	6.80
16.....	5.20	4.70	4.80	8.40	5.30	6.00	4.50	4.60	4.90	5.20	7.20	6.70
17.....	5.10	4.70	4.80	8.20	5.30	6.00	4.50	4.60	4.90	5.20	7.30	6.60
18.....	5.00	4.70	4.90	8.20	5.55	5.90	4.50	4.60	4.90	5.20	7.30	6.50
19.....	5.00	4.70	4.90	8.20	5.75	5.85	4.60	4.60	4.90	5.20	7.20	6.50
20.....	5.00	4.70	5.20	8.10	5.95	5.65	4.50	4.60	4.90	5.20	7.10	6.50
21.....	5.00	4.70	5.90	8.00	6.40	5.50	4.60	4.60	5.05	5.20	6.80	6.50
22.....	4.90	4.70	6.40	8.00	6.40	5.50	4.50	4.60	5.20	5.20	6.70	6.60
23.....	4.90	4.70	6.30	7.80	6.80	5.40	4.50	4.60	5.30	5.20	6.60	6.40
24.....	4.90	4.80	6.30	7.60	6.90	5.30	4.50	4.60	5.30	5.20	6.60	6.30
25.....	4.90	4.80	6.20	7.60	7.00	5.20	4.50	4.60	5.40	5.30	6.60	6.20
26.....	4.90	4.90	6.20	7.50	7.20	5.20	4.50	4.60	5.40	5.50	6.40	6.20
27.....	4.90	4.90	6.20	7.40	7.10	5.10	4.55	4.60	5.40	5.80	6.40	6.20
28.....	4.90	4.90	6.20	7.20	7.00	5.05	4.60	4.60	5.45	5.85	6.20	6.10
29.....	4.90	4.90	6.20	7.00	7.00	5.00	4.60	4.60	5.40	5.95	6.20	6.10
30.....	4.90	......	6.40	6.70	7.00	5.00	4.60	4.65	5.40	6.20	6.10	6.10
31.....	4.90	......	6.70	......	7.60	......	4.60	4.70	......	6.00	......	6.20

NOTE.— Relation of gage height to discharge at this station was not affected by ice.

Mean Daily Discharge, Second-feet, of Oswegatchie River near Ogdensburg, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	4,600	1,030	1,030	6,960	4,890	9,660	1,200	580	870	1,970	3,440	3,730
2	4,020	870	1,030	7,850	4,600	10,600	1,200	580	870	2,180	3,160	3,730
3	3,440	870	1,030	8,150	4,310	11,500	1,200	580	950	1,970	2,890	4,020
4	3,160	870	870	8,450	4,020	11,200	1,200	580	1,030	1,970	2,890	6,960
5	2,890	870	870	8,750	3,440	10,600	1,030	580	1,030	1,970	2,890	8,150
6	2,640	870	870	9,960	3,020	10,600	870	580	1,030	2,080	2,640	9,050
7	2,640	870	870	11,500	2,890	9,350	870	580	1,030	1,970	2,640	8,450
8	2,400	870	870	14,300	2,890	8,150	870	580	1,200	1,770	3,160	8,150
9	2,400	870	870	14,900	2,760	6,960	870	720	1,200	1,770	4,020	8,150
10	2,180	870	720	15,200	2,520	6,360	720	720	1,200	1,770	5,180	8,150
11	2,180	870	720	14,900	2,400	5,780	720	720	1,200	1,770	5,780	7,550
12	2,180	870	720	14,300	1,970	5,480	720	720	1,200	1,570	6,070	6,660
13	1,970	720	720	13,000	2,180	5,180	580	720	1,200	1,570	6,070	6,360
14	1,770	720	720	12,400	2,290	4,020	580	650	1,200	1,570	6,660	6,070
15	1,770	720	720	11,800	1,970	3,730	580	580	1,030	1,570	6,900	5,780
16	1,570	720	870	10,600	1,770	3,440	450	580	1,030	1,570	6,900	5,480
17	1,380	720	870	9,900	1,770	3,440	450	580	1,030	1,570	7,250	5,180
18	1,200	720	1,030	9,900	2,290	3,160	450	580	1,030	1,570	7,250	4,890
19	1,200	720	1,030	9,960	2,760	3,020	580	580	1,030	1,570	6,900	4,890
20	1,200	720	1,570	9,660	3,300	2,520	450	580	1,030	1,570	6,660	4,890
21	1,200	720	3,160	9,350	4,600	2,180	580	580	1,290	1,570	5,780	4,890
22	1,030	720	4,600	9,350	4,600	2,180	450	580	1,570	1,570	5,480	5,180
23	1,030	720	4,310	8,750	5,780	1,970	450	580	1,770	1,570	5,180	4,600
24	1,030	870	4,310	8,150	6,070	1,770	450	580	1,770	1,570	5,180	4,310
25	1,030	870	4,020	8,150	6,360	1,570	450	580	1,970	1,770	5,180	4,020
26	1,030	1,030	4,020	7,850	6,960	1,570	450	580	1,970	2,180	4,600	4,020
27	1,030	1,030	4,020	7,550	6,660	1,380	515	580	1,970	2,890	4,600	4,020
28	1,030	1,030	4,020	6,960	6,360	1,290	580	580	2,080	3,020	4,020	3,730
29	1,030	1,030	4,020	6,360	6,360	1,200	580	580	1,970	3,300	4,020	3,730
30	1,030	......	4,600	5,480	6,360	1,200	580	650	1,970	4,020	3,730	3,730
31	1,030	......	5,480	......	8,150	......	580	720	......	3,440	......	4,020

NOTE.— Daily discharge determined from a fairly well-defined rating curve.

Monthly Discharge of Oswegatchie River near Ogdensburg, N. Y.
[Drainage area, 1,580 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1912.					
January	4,600	1,030	1,880	1.19	1.37
February	1,030	720	841	0.532	0.57
March	5,480	720	2,080	1.32	1.52
April	15,200	5,480	10,000	6.33	7.06
May	8,150	1,770	4,070	2.58	2.97
June	11,500	1,200	5,040	3.19	3.56
July	1,200	450	686	0.434	0.50
August	720	580	612	0.387	0.45
September	2,080	870	1,320	0.835	0.93
October	4,020	1,570	2,010	1.27	1.46
November	7,250	2,640	4,910	3.11	3.47
December	9,050	3,730	5,570	3.53	4.07

LAKE ONTARIO DRAINAGE.

GENERAL FEATURES.

In the northwestern part of the state of New York, between Niagara and St. Lawrence rivers, is an area aggregating about 12,400 square miles drained by streams which flow into Lake Ontario. The divide which controls this drainage is very irregular. Extending to the south and southeast from Fort Niagara, it passes around the head waters of the Genesee a short distance into Pennsylvania; thence reëntering New York it runs southward and eastward from the interior group of lakes, turns to the north, encircles the sources of Black river, turns again to the west, and descends to the lake. The country thus included is level or gently undulating in the counties bordering the lake, but farther south it becomes more rolling, and a series of ridges, gradually increasing in height, stretch down between Cayuga and Seneca, and their companion lakes, finally becoming merged with the elevated broken country forming the principal divide, the abrupt slopes of which attain altitudes of from 2,000 to 2,500 feet about the head waters of the Genesee.

The easterly, or Black river, lobe of the drainage basin receives the run-off from the southwestern slope of the Adirondack mountains — largely a rugged and forest-covered area — receiving heavy precipitation, especially in the winter.

Drift deposits are generally scattered over the section, and the soil is in part derived from that source and in part from the disintegration of native rocks.

The principal streams of the area are the Oswego, formed by the union of Seneca and Oneida rivers, which drain the chain of lakes in central New York, the Genesee, Salmon and Black rivers.

BLACK RIVER DRAINAGE BASIN.

BLACK RIVER.

DESCRIPTION.

Black river rises in the western part of Hamilton county, N. Y., flows southwestward across Herkimer county into Oneida county, turns near Forestport and runs somewhat west of north through Lewis county to eastern Jefferson county, and then flows westward to Black river bay, at the eastern extremity of Lake Ontario. The upper part of the basin is very rugged and mountainous and contains a large number of lakes.

The regimen of the river is controlled by storage on its upper tributaries, including Beaver river at Beaver, a series of reservoirs at the head waters of Moose river, and additional reservoirs at Forestport and on the head waters of the main river.

Water is diverted from Black river through Forestport feeder to supply the Black river canal at Boonville. A portion of this diverted water flows northward from Boonville and enters Black river again at Lyons Falls; the remainder flows southward through the Black river canal and enters the Erie canal at Rome.

The results of gagings of this diversion may be found in the State Engineer's report for 1906, supplement, page 36, and also on pages 597–598 of the report for 1907.

BLACK RIVER NEAR FELTS MILLS, N. Y.

This station was established by Robert E. Horton, August 29, 1902, and has since been maintained by the U. S. Geological Survey in coöperation with this Department. It is located at the dam of the Lefebvre Paper Company, formerly owned by the Black River Traction Company, near the village of Felts Mills. The dam is nine miles upstream from Watertown and seven miles upstream from the old Huntingtonville gaging station on this stream. The drainage area is estimated at 1,851 square miles, or 37.5 square miles less than at Huntingtonville. The intervening area is mainly drained by two small streams, Townsend and Rutland Hollow creeks.

During the summer of 1910 the timber dam formerly used at this gaging station was replaced by a masonry dam located a few rods farther downstream. The new dam has a horizontal crest 3.75 feet in width. The downstream face slopes with a batter of about 1 on 1. The main crest, which is 300.45 feet in length, is substantially level. A discharge curve for this dam, using suitable coefficients, has been prepared.

The gage is attached vertically to a crib at the left-hand side of the stream above the mill. Correction is made to the gage readings for velocity of approach during high water. The discharge over the spillways has been calculated by means of the weir formula, using coëfficients derived from experiments of the United States Geological Survey for a dam of similar cross-section.

A wood pulp mill was constructed adjacent to this dam and has been in operation in 1907 and subsequent years. The mill contains four 72-inch and one 45-inch Smith-McCormick turbines. A record is kept of the hours run, and gate opening of each wheel, as well as of the head under which they operate.

Mean Daily Discharge, Second-feet, of Black River near Felts Mills, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1....	3,054	1,599	2,394	7,148	10,168	13,735	1,148	951	*1,240	1,938	2,355	*1,405
2....	3,251	1,760	2,192	8,120	9,024	*13,201	1,116	951	1,491	5,467	2,589	2,029
3....	3,340	1,798	*2,434	8,120	8,120	10,719	1,320	741	1,435	3,396	*2,738	6,706
4....	3,341	*1,814	1,509	8,612	7,490	9,269	467	*788	1,816	2,754	3,105	6,444
5....	3,348	1,311	1,826	7,961	*6,232	7,490	1,341	1,159	2,001	3,053	2,754	6,188
6....	2,105	2,463	1,614	11,476	5,606	5,644	1,116	923	1,759	*1,941	2,509	6,315
7....	*2,600	2,647	2,105	*24,751	5,766	4,480	*1,006	1,309	1,653	2,002	2,355	6,188
8....	1,515	2,647	1,983	22,505	5,418	3,741	1,367	1,127	*1,322	2,075	5,244	*5,226
9....	1,986	2,233	1,983	19,643	5,529	*3,028	1,116	826	1,399	2,015	5,603	5,088
10....	2,055	2,325	*2,128	17,362	4,991	2,876	1,213	1,161	1,309	1,705	*4,216	3,778
11....	1,635	*1,881	1,387	15,234	4,653	3,107	1,116	*931	1,361	1,705	4,762	3,334
12....	1,696	1,619	1,812	12,429	*3,830	2,876	1,116	1,213	1,116	1,816	3,983	3,197
13....	1,696	2,192	1,812	10,982	3,267	2,381	1,116	923	1,341	*2,035	3,384	2,355
14....	*2,405	2,325	1,470	*12,565	4,385	2,381	*859	1,358	1,341	2,431	3,578	2,280
15....	1,184	2,325	1,758	11,981	5,058	2,274	1,514	1,182	*1,240	2,208	3,880	*1,848
16....	1,957	2,192	1,812	16,179	4,480	*1,916	1,309	1,161	1,494	2,137	3,677	2,431
17....	1,986	1,942	*3,202	24,592	4,953	1,853	1,116	1,349	2,355	2,002	*2,844	2,280
18....	2,055	*2,353	2,971	28,033	6,232	1,799	1,213	*859	2,509	1,938	3,105	2,208
19....	1,725	1,430	4,669	27,574	*6,365	1,399	1,116	917	2,137	1,816	2,800	2,840
20....	2,267	2,128	5,410	22,231	6,499	2,355	1,083	923	1,876	*1,848	2,714	3,197
21....	*3,083	2,128	5,525	*20,180	8,612	2,469	*1,160	923	2,069	2,137	2,906	3,197
22....	2,492	2,064	5,190	14,580	9,980	1,759	1,514	983	*1,491	2,208	2,631	*2,844
23....	3,106	2,606	4,977	14,786	10,345	*1,082	1,309	951	1,583	2,069	2,431	3,015
24....	2,947	2,606	*5,294	18,242	10,532	1,148	1,367	951	1,876	1,938	*2,429	2,315
25....	2,647	*2,827	3,749	19,899	10,168	1,435	1,271	*931	2,069	3,196	2,714	2,035
26....	1,197	2,033	3,919	16,410	*8,779	1,174	1,224	1,341	2,355	4,748	2,450	2,754
27....	2,259	2,606	3,348	13,482	7,961	1,367	1,165	1,341	2,753	*3,508	2,714	2,208
28....	*2,273	2,606	3,348	*11,629	6,499	1,341	*720	1,116	2,678	4,339	2,800	2,137
29....	878	2,463	4,385	11,436	7,069	1,320	981	1,387	*1,405	3,384	2,260	*1,082
30....	1,942	......	5,606	11,244	9,801	*931	937	1,399	1,876	2,840	2,097	1,836
31....	1,717	......	*8,507	....	12,029	....	969	1,309	......	2,671	......	2,335
Mean..	2,253	2,170	3,236	15,646	7,092	3,685	1,141	1,077	1,745	2,559	3,129	3,263

* Indicates Sunday.

Monthly Discharge of Black River near Felts Mills, N. Y.
[Drainage area, 1,851 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1912.					
January	3,431	878	2,253	1.22	1.41
February	2,827	1,311	2,170	1.17	1.26
March	8,507	1,387	3,236	1.75	2.02
April	28,033	7,148	15,646	8.45	9.43
May	12,029	3,267	7,092	3.83	4.42
June	13,735	931	3,685	1.99	2.22
July	1,514	720	1,141	0.616	0.71
August	1,399	741	1,077	0.582	0.671
September	2,753	1,116	1,745	0.943	1.05
October	5,467	1,705	2,559	1.38	1.59
November	5,603	2,097	3,129	1.69	1.89
December	6,706	1,082	3,263	1.76	2.03

MOOSE RIVER DRAINAGE BASIN.

DESCRIPTION.

Moose river is tributary to Black river at Lyons Falls, N. Y., joining Black river just above the head of the fall of about 50 feet. The drainage of Moose river lies chiefly in Hamilton and Herkimer counties and comprises a wild, rugged and little inhabited region largely forest covered, but containing also large tracts of cut and burned-over lands, numerous and extensive swamps and lakes. The stream above the gaging station near McKeever comprises three main branches. The south branch is chiefly broad and sluggish. The area tributary to this branch contains extensive swamps and marshes and but few lakes, the most important lakes being the Limekill and Little Moose lakes. The middle branch is substantially a continuous chain of lakes, known as the Fulton Chain, extending from Old Forge a distance of about 15 miles upstream through eight different lakes. The outflow from Fulton Chain is artificially controlled by a State dam at Old Forge. The first to fourth lakes, inclusive, are at elevation 1,706 feet above tide. There is also a dam at the outlet of the sixth lake. Sixth, seventh and eighth lakes are at elevations 1,785 to 1,788 feet above tide. The north branch of the stream is made up of a large number of scattered lakes, the most important one being Big Moose lake. The lower course of the north branch is sluggish and tortuous. The drainage basin above McKeever is nearly all shown on the Big Moose, Raquette lakes, Old Forge and West Canada lakes quadrangles of the U. S. Geological Survey topographic maps.

MOOSE RIVER AT MOOSE RIVER, N. Y.

A gaging station was established June 5, 1900, at Moose River village by Robert E. Horton, and has since been maintained by the United States Geological Survey in coöperation with this Department.

The stream is smooth above the gaging station to the foot of McKeever dam, two miles upstream, but a short distance above the gage it is divided by an island, which creates an ice jam during winter and spring freshets. A short distance below the station a fall occurs. The bed of the stream is of cobble with occasional boulders, the current is smooth, and the depth is fairly uniform. The stream freezes over in winter, alternate layers of ice and snow or slush often forming in such a manner as to prevent discharge measurements being made.

A cableway, having a clear span of 269 feet, was erected in June, 1903, from which current-meter measurements have since been made. The initial point for soundings is the left support of the cable.

The gage, which is read twice daily by Chris Hannon, consists of a graduated board scale, attached to posts on the left bank of the stream, and comprises a high-water and a low-water section. During the ice season the gage is read once each week. The gage was carried out by an ice freshet in February, 1903, and was replaced at a slightly different elevation. The bench-mark is on the top of a boulder on the left bank, 300 feet upstream from the cableway. The elevation of the bench-mark is arbitrarily assumed at 100.00. The zero mark of the gage was elevation 84.64 prior to February 28, 1903, and has been elevation 84.47, or 15.53 feet below the bench-mark, since February 28, 1903.

Mean Daily Gage Height, in Feet, of Moose River at Moose River, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	3.00	......	......	......	4.60	4.40	0.60	0.80	0.25	1.60	3.00	1.80
2	2.80	......	2.60	......	4.30	3.80	0.90	0.70	0.65	1.80	3.60	2.80
3	2.70	0.90	......	......	4.60	3.30	0.60	0.90	1.15	1.90	3.40	4.10
4	2.60	......	......	......	4.40	3.00	0.00	0.90	1.10	2.00	3.20	4.00
5	2.40	......	......	......	4.20	2.60	0.50	0.80	0.95	1.60	2.80	3.40
6	2.20	......	......	3.90	4.00	2.30	0.55	0.90	0.90	1.60	2.50	2.80
7	2.00	......	......	......	3,80	2.40	0.65	0.80	1.05	1.45	3.50	2.40
8	2.40	......	......	......	3.80	2.20	0.75	0.80	1.00	1.40	4.90	2.00
9	2.60	......	2.50	......	3.60	2.00	0.80	0.70	1.10	1.30	4.70	1.70
10	2.50	0.80	......	......	3.20	2.00	0.70	0.70	1.00	1.40	4.10	1.60
11	2.50	......	......	......	3.00	1.90	0.70	0.80	0.90	1.50	3.10	1.60
12	2.40	......	......	......	3.00	1,70	0.60	0.80	0.85	1.60	2.80	1.80
13	2.60	......	......	2.60	2.90	1.50	0.50	0.80	0.00	1.80	2.40	1.90
14	2.70	......	......	3.00	3.00	1.20	0.00	0.75	0.60	2.00	2.20	2.00
15	......	......	......	4.60	2.90	0.85	0.50	0.90	0.95	2.00	2.80	2.20
16	......	1.90	3.00	7.80	2.90	0.00	0.65	0.80	1.40	2.00	2.80	2.40
17	......	2.20	......	8.50	3.50	1.05	0.70	0.70	1.80	1.90	2.40	2.40
18	......	......	......	7.50	3.80	1.10	0.80	0.90	1.60	1.80	2.00	2.20
19	......	......	......	6.70	3.80	1.35	0.80	0.80	1.60	1.80	2.00	1.90
20	2.20	......	......	5.60	4.10	1.30	0.80	0.65	1.45	1.90	2.00	1.80
21	......	......	......	5.40	4.60	1.25	0.75	0.50	1.35	1.80	2.00	1.80
22	......	......	......	5.70	5.00	0.95	0.95	0.00	1.45	2.00	2.00	2.20
23	......	......	3.10	9.00	4.80	1.05	0.90	0.60	1.80	2.00	2.00	2.40
24	......	2.30	......	6.40	4.40	1.00	0.90	0.65	2.00	2.80	2.00	2.20
25	......	......	......	5.40	3.90	0.95	0.95	0.80	2.00	3.80	2.00	2.40
26	......	......	......	5.20	3.60	0.95	1.00	1.35	2.00	3.90	1.90	2.40
27	0.90	......	......	5.40	3.70	0.85	0.90	1.10	2.20	3.60	2.00	2.20
28	......	......	......	5.80	4.00	0.80	0.25	1.00	2.20	3.40	1.80	2.00
29	......	......	......	5.60	4.40	0.70	0.60	1.00	1.90	3.10	1.80	2.20
30	......	......	3.10	4.70	5.70	0.00	0.80	1.10	1.60	3.00	1.90	2.40
31	......	......	......	......	5.00	......	0.80	0.75	......	2.80	......	2.40

NOTE.—Relation of gage height to discharge was affected by ice January 9 to April 12.

Current-meter Discharge Measurements of Moose River at Moose River, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Total area.	Discharge.
		Feet.	*Square feet.*	*Second-feet.*
1912.				
Feb. 16 [a]	Frank Weber	1.90	397	310
Feb. 17 [a]	Frank Weber	2.35	448	403
April 20 [b]	C. S. De Golyer	6.00	1,510	3,710
April 20	C. S. De Golyer	5.75	1,460	3,930
Oct. 25	Frank Weber	4.20	....	2,120

[a] Mean current made under complete ice cover.
[b] Results doubtful owing to logs interferi ng with work; probable back water effect.

Mean Daily Discharge, Second-feet, of Moose River at Moose River, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	1,150	130	......	......	2,500	2,300	195	240	128	465	1,150	535
2	1,020	130	......	......	2,210	1,760	265	215	205	535	1,590	1,020
3	965	130	......	......	2,500	1,360	195	265	330	570	1,430	2,030
4	910	130	......	......	2,300	1,150	90	265	315	610	1,290	1,940
5	800	......	......	......	2,120	910	175	240	278	465	1,020	1,430
6	700	......	......	......	1,940	750	185	265	265	465	855	1,020
7	610	......	......	......	1,760	800	205	240	302	420	1,510	800
8	595	......	......	......	1,760	700	228	240	290	405	2,810	610
9	......	......	......	......	1,590	610	240	215	315	375	2,600	500
10	......	......	......	......	1,290	610	215	215	290	405	2,030	465
11	......	......	......	......	1,150	570	215	240	265	435	1,220	465
12	......	......	......	......	1,150	500	195	240	252	465	1,020	535
13	......	......	......	910	1,080	435	175	240	90	535	800	570
14	......	......	......	1,150	1,150	345	90	228	195	610	700	610
15	......	......	......	2,500	1,080	252	175	265	278	610	1,020	700
16	......	310	......	6,220	1,080	90	205	240	405	610	1,020	800
17	......	......	......	7,060	1,510	302	215	215	535	570	800	800
18	......	......	......	5,860	1,760	315	240	265	465	535	610	700
19	......	......	......	4,900	1,760	390	240	240	465	535	610	570
20	400	......	......	3,580	2,030	375	240	205	420	570	610	535
21	......	......	......	3,360	2,500	360	228	175	390	535	610	535
22	......	......	......	3,700	2,920	278	278	90	420	610	610	700
23	......	......	......	7,660	2,700	302	265	195	535	610	610	800
24	......	......	......	4,540	2,300	290	265	205	610	1,020	610	700
25	......	......	......	3,360	1,850	278	278	240	610	1,760	610	800
26	......	......	......	3,140	1,590	278	290	390	610	1,850	570	800
27	130	......	......	3,360	1,670	252	265	315	700	1,590	610	700
28	......	......	......	3,820	1,940	240	128	290	700	1,430	535	610
29	......	......	......	3,580	2,300	215	195	290	570	1,220	535	700
30	......	......	......	2,600	3,700	90	240	315	465	1,150	570	800
31	......	......	......	......	2,920	......	240	228	......	1,020	......	800

NOTE.— Daily discharge, January 1 to 7 and April 13 to December 31, determined from a well-defined rating curve.

Monthly Discharge of Moose River at Moose River, N. Y.
[Drainage area, 370 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1912.					
January	1,150	130	482	1.30	1.50
February	440	115	268	0.724	0.78
March	640	440	535	1.45	1.67
April	7,660	680	2,700	7.30	8.14
May	3,700	1,080	1,940	5.24	6.04
June	2,300	90	570	1.54	1.72
July	290	90	215	0.581	0.67
August	390	90	242	0.654	0.75
September	700	90	390	1.05	1.17
October	1,850	375	741	2.00	2.31
November	2,810	535	1,020	2.76	3.08
December	2,030	465	793	2.14	2.47

NOTE.— Discharge, January 8 to March 12, estimated by means of an ice rating curve, observer's notes and climatologic records.

SALMON RIVER DRAINAGE BASIN.

DESCRIPTION.

Salmon river rises in the southwestern part of Lewis county and flows southward and then northward, entering Lake Ontario near Port Ontario. Its drainage area comprises about 285 square miles. The topography is generally rolling in character and the soil is sandy, rock lying near the surface in the upper part of the basin, where there are extensive tracts of virgin forest.

The mean annual precipitation is about thirty-five inches, and during the winter there is usually a heavy fall of snow, which often accumulates in the forest areas to a depth of several feet. The gradual melting of this snow, in the spring, tends to prevent high freshets.

The basin affords several opportunities for storage. • At High Falls there is an undeveloped fall of about 110 feet, occurring in a very short distance. Considering its size, this river has rather important power possibilities.

A gaging station has been maintained in this river basin near Pulaski from 1900 to 1908 and 1910 to 1912.

SALMON RIVER AT FOX'S BRIDGE, NEAR PULASKI, N. Y.

This station is located on the first highway bridge above the village of Pulaski and was established by Robert E. Horton for the U. S. Geological Survey, in coöperation with this Department, September 5, 1900. A vertical staff gage was attached to the upstream end of the center pier, with its zero 11.59 feet below the bench-mark, which is the top of the cap stone of the center pier.

This gage was removed by ice during the winter of 1901–1902 and then replaced July 23, 1902, by a chain gage, having its zero 12.79 feet below the original bench-mark. The station was discontinued June 30, 1907, reëstablished August 16, 1908, and discontinued December 6, 1908. It was maintained during these periods in coöperation with this Department.

On July 14, 1910, it was reëstablished by the Survey in coöperation with the State Water Supply Commission of New York, for the purpose of obtaining general statistical data regarding the flow of Salmon river. The gage datum has remained permanent since July 23, 1902. Discharge measurements are made from the bridge or by wading.

The station can be reached by a short drive from either Pulaski or Richland. Conditions are poor for records during the winter, when the channel usually becomes clogged by ice. The open channel rating is fairly good.

Information regarding this station is contained in the reports of this Department and in the annual reports of the U. S. Geological Survey.

Mean Daily Gage Height, in Feet, of Salmon River at Fox's Bridge, near Pulaski, N. Y.

DAY.	Jan.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.										
1	3.45	6.60	4.60	4.35	2.60	2.40	2.50	4.50	3.22	3.15
2	3.45	5.20	4.50	3.90	2.58	2.40	2.50	4.45	3.22	3.42
3	3.35	4.90	4.50	3.85	2.58	2.60	2.50	3.90	3.25	5.90
4	3.15	4.40	4.30	3.90	2.55	2.62	2.60	4.00	3.15	5.20
5	3.10	4.50	4.10	3.65	2.60	2.55	2.60	4.10	3.15	4.50
6	3.00	5.40	4.15	3.45	2.65	2.50	3.02	3.60	3.05	4.30
7	......	6.60	4.25	3.38	2.58	2.48	3.00	3.35	3.22	4.90
8	......	6.90	4.05	3.28	2.60	2.42	2.80	3.25	5.10	4.30
9	......	5.90	3.90	3.18	2.55	2.40	2.65	3.10	4.80	3.60
10	......	5.40	3.75	3.05	2.50	2.48	2.58	3.15	4.40	3.60
11	......	5.20	3.60	3.00	2.50	3.12	2.85	3.25	4.00	3.45
12	......	4.75	3.55	3.02	2.50	2.90	3.25	3.20	3.75	3.30
13	......	4.85	4.05	3.05	2.48	2.75	2.95	3.60	3.60	3.40
14	......	5.50	4.05	3.00	2.50	2.75	2.80	3.55	4.20	3.55
15	......	7.00	3.85	2.90	2.55	2.72	2.80	3.32	4.50	3.55
16	......	7.50	3.75	2.92	2.68	2.60	3.65	3.18	4.10	3.50
17	......	7.20	4.50	3.30	2.62	2.52	3.38	3.05	3.75	3.38
18	......	6.30	4.80	3.10	2.52	2.42	3.08	2.95	3.65	3.40
19	......	6.50	4.20	3.02	2.50	2.50	3.02	3.05	3.40	4.00
20	......	5.60	3.90	2.95	2.48	2.52	3.05	3.48	3.45	4.20
21	......	5.30	5.10	2.90	2.52	2.50	3.00	3.30	3.50	4.15
22	......	5.90	5.70	2.82	2.90	2.50	2.95	3.15	3.50	3.95
23	......	7.40	4.60	2.80	2.75	2.50	2.92	3.12	3.55	3.80
24	......	6.00	4.20	2.75	2.60	2.58	4.10	3.90	3.50	3.80
25	......	5.20	4.05	2.72	2.50	2.60	4.30	4.50	3.60	3.50
26	......	5.30	3.80	2.68	2.50	2.68	4.10	4.40	3.50	3.40
27	......	5.60	3.55	2.65	2.50	2.70	3.70	4.20	3.50	3.40
28	......	5.60	3.40	2.65	2.42	2.70	3.32	3.95	3.40	3.36
29	......	4.90	4.90	2.65	2.42	2.65	3.20	3.50	3.28	3.28
30	......	4.60	5.60	2.60	2.40	2.60	3.50	3.38	3.35	3.38
31	......	......	5.20	......	2.40	2.60	......	3.22	......	3.83

NOTE.— Relation of gage height to discharge was affected by ice, January 7 to April 1.

Current-meter Discharge Measurements of Salmon River at Fox's Bridge, near Pulaski, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Discharge.
1912.		*Feet.*	*Second-feet.*
April 13	C. S. De Golyer	4.78	2,050
April 17	C. S. De Golyer	7.45	9,430
Oct. 18	J. G. Mathers	3.00	314

Mean Daily Discharge, Second-feet, of Salmon River at Fox's Bridge, near Pulaski, N. Y.

DAY.	Jan.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.										
1	642	3,000	1,800	1,500	152	88	118	1,680	479	432
2	642	2,750	1,680	1,020	145	88	118	1,620	479	620
3	570	2,240	1,680	978	145	152	118	1,020	500	4,250
4	432	1,560	1,440	1,020	135	160	152	1,120	432	2,750
5	400	1,680	1,220	802	152	135	152	1,220	432	1,680
6	340	3,140	1,280	642	172	118	352	760	370	1,440
7	......	6,330	1,380	591	145	112	340	570	479	2,240
8	......	7,380	1,170	521	152	94	235	500	2,570	1,440
9	......	4,250	1,020	452	135	88	172	400	2,090	760
10	......	3,140	888	370	118	112	145	432	1,560	760
11	......	2,750	760	340	118	413	260	500	1,120	642
12	......	2,020	720	352	118	285	500	465	888	535
13	......	2,160	1,170	370	112	213	312	760	760	605
14	......	3,340	1,170	340	118	213	235	720	1,330	720
15	......	7,750	978	285	135	200	235	549	1,680	720
16	......	9,660	888	296	183	152	802	452	1,220	680
17	......	8,500	1,680	535	160	125	591	370	888	591
18	......	5,370	2,090	400	125	94	388	312	802	605
19	......	6,000	1,330	352	118	118	352	370	605	1,120
20	......	3,550	1,020	312	112	125	370	665	642	1,330
21	......	2,940	2,570	285	125	118	340	535	680	1,280
22	......	4,250	3,770	245	285	118	312	432	680	1,070
23	......	9,270	1,800	235	213	118	296	413	720	930
24	......	4,510	1,330	213	152	145	1,220	1,020	680	930
25	......	2,750	1,170	200	118	152	1,440	1,680	760	680
26	......	2,940	930	183	118	183	1,220	1,560	680	605
27	......	3,550	720	172	118	191	845	1,330	680	605
28	......	3,550	605	172	94	191	549	1,070	605	577
29	......	2,240	2,240	172	94	172	465	680	521	521
30	......	1,800	3,550	152	88	152	680	591	570	591
31	......	......	2,750	......	88	152	......	479	......	958

NOTE.— Daily discharge determined from a well-defined rating curve. Discharge, April 1 estimated.

Monthly Discharge of Salmon River at Fox's Bridge, near Pulaski, N. Y.
[Drainage area, 260 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1912.					
January	....	....	340	1.31	1.51
February	....	....	270	1.04	1.12
March	....	....	440	1.69	1.95
April	9,660	1,560	4,150	16.00	17.85
May	3,770	605	1,510	5.81	6.70
June	1,500	152	450	1.73	1.93
July	285	88	137	0.527	0.61
August	413	88	154	0.592	0.68
September	1,440	118	444	1.71	1.91
October	1,680	312	783	3.01	3.47
November	2,570	370	863	3.32	3.70
December	4,250	432	1,050	4.04	4.66

NOTE.— Discharge, January to April 1, estimated from the discharge at Stillwater bridge. Mean discharge, January 7–31, estimated at 300 second-feet.

OSWEGO-ONEIDA-SENECA RIVER DRAINAGE BASIN.

DESCRIPTION OF BASIN.

Oswego river is formed by the union of Seneca and Oneida rivers at Three River Point about twelve miles northwest of Syracuse, N. Y., whence its course is northwestward to Oswego, where it enters Lake Ontario. The length of the river, from the junction to the mouth, is about 20.5 miles, and the drainage basin along this distance is a narrow strip of country, moderately rolling. Above the junction of Seneca and Oneida rivers the basin spreads out, attaining an extreme width east and west of about 100 miles and north and south of from seventy to eighty miles. There is, on the whole, a gradual rise from the low, level lands which border Lake Ontario to the north-south ridges which separate the various lakes south of Seneca river and which farther south become merged with the still more elevated country lying along the southern boundary of the Lake Ontario watershed.

The most remarkable feature of the drainage basin is the chain of lakes stretching across its southern border. From west to east the principal lakes are, in order, Canandaigua, Keuka, Seneca, Cayuga, Owasco, Skaneateles and Oneida. These seven lakes include a water-surface of, approximately, 280 square miles, increased by four smaller lakes — Cross, Onondaga, Otisco and Cazenovia — to about 295 square miles. The larger of the lakes, Oneida, Cayuga and Seneca, are used for steam-towing navigation, having connection with the Erie and Oswego canals. Cayuga and Seneca lakes are noted for their depth and for the abrupt slopes of their beds. The influence of the lakes on Oswego river is of the utmost importance in contributing to the steadiness of its flow.

A fall of 100 feet in the course of the main river is largely utilized by seven dams, which also partly canalize the stream. The intervening stretches are covered by the Oswego canal, which draws its water-supply from the river.

Drainage Areas Tributary to Oneida Lake and Oneida River. a

LOCALITY.	AREA IN SQUARE MILES.		
	Place to place.	Sub-total.	Total.
East branch, Fish creek.			
Head to junction with Alder creek	45.40	45.40	
Alder creek	25.70	71.10	
Junction with Alder creek to junction with Point Rock creek.	36.70	107.80	
Point Rock creek	19.90	127.70	
Junction with Point Rock creek to junction with Fall brook.	4.50	132.20	
Fall brook	13.50	145.70	
Junction with Fall brook to junction with Florence creek	1.30	147.00	
Florence creek	20.40	167.40	
Junction with Florence creek to junction with Furnace creek (Taberg)	1.70	169.10	
Furnace creek	14.40	183.50	
Taberg to junction with West branch, Fish creek	3.60	187.10	
West branch, Fish creek.			
Head to lower dam, Williamston	25.80	25.80	
Williamston to West Camden	27.10	52.90	
West Camden to junction with Mad river, Camden	14.20	67.10	
Mad river	45.40	112.50	
Camden to junction with Little river	21.60	134.10	
Little river	52.10	186.20	
Little river to McConnellsville	4.00	190.20	
McConnellsville to junction with East branch, Fish creek	11.90	202.10	
Junction of East and West branches, Fish creek, to junction with Wood creek	27.80	389.20	417.00
Wood creek.			
Above Erie canal, Rome	10.20	10.20	
Erie canal, Rome, to junction with Mud creek	2.00	12.20	
Mud creek	20.00	32.20	
Junction with Mud creek to junction with Canada creek	6.40	38.60	
Canada creek	31.00	69.60	
Junction with Canada creek to junction with Stoney creek	1.20	70.80	
Stoney creek	20.40	91.20	
Junction with Stoney creek to junction with Fish creek	31.40	122.60	122.60
Oneida creek.			
Head to Peterboro	13.40	13.40	
Peterboro to falls	6.70	20.10	
Falls to Munnsville	15.60	35.70	
Munnsville to Kenwood	27.30	63.00	
Kenwood to Oneida Castle (State dam)	10.80	73.80	
Oneida Castle to Sconondoa creek, Oneida	2.10	75.90	
Sconondoa creek	34.30	110.20	
Sconondoa creek to Durhamville	4.80	115.00	
Durhamville to mouth	28.00	143.00	143.00
Canaseraga creek.			
Head to Perryville	5.70	5.70	
Perryville to Erie canal	9.00	14.70	
Erie canal to Douglas ditch	8.10	22.80	
Cowassalon creek.			
Head to Clockville creek	17.20	17.20	
Clockville creek	11.10	28.30	
Clockville creek to Erie canal	5.50	33.80	
Erie canal to mouth of Douglas ditch	39.30	73.10	
Junction with Douglas ditch to Lakeport	3.20	95.90	99.10
Chittenango creek.			
Erieville reservoir, water-surface	0.45	0.45	
Erieville reservoir, land drainage	3.30	3.75	
Erieville reservoir to Cazenovia lake	30.50	34.25	
Cazenovia lake, water-surface	1.70	35.95	
Cazenovia lake, land drainage	8.70	44.65	
Cazenovia lake to Chittenango falls	14.40	59.05	
Chittenango falls to State dam, Chittenango	17.90	76.95	
State dam to junction with Butternut creek	28.10	105.05	
Butternut creek.			
Head to Jamesville reservoir	47.40	47.40	
Jamesville reservoir to State dam	5.70	53.10	
State dam to junction with Limestone creek	19.20	72.30	
Limestone creek.			
De Ruyter reservoir, water-surface	1.00	1.00	
De Ruyter reservoir, land drainage	17.80	18.80	
De Ruyter reservoir to junction with East branch	4.30	23.10	
East, or New Woodstock branch	12.60	35.70	

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a From U. S. Geological Survey topographic maps.

Drainage Areas Tributary to Oneida Lake and Oneida River — (Concluded).

LOCALITY.	AREA IN SQUARE MILES.		
	Place to place.	Sub-total.	Total.
Butternut creek (*Concluded*).			
Junction with East branch to junction with West branch	34.50	70.20	
West branch, Limestone creek, enters above State feeder dam	24.80	95.00	
State dam to junction with Butternut creek	18.20	113.20	185.50
Junction with Limestone creek to Chittenango creek	1.10	186.60	291.65
Chittenango creek, junction with Butternut creek to Bridgeport	30.30	321.95	
Chittenango creek, Bridgeport to Oneida lake	4.30	326.25	326.25
Oneida lake drainage through main streams	....	1,107.95	
Big Bay creek	26.30		
Little Bay creek	11.50		[illegible]
Scriba creek	45.40		[illegible]
Coast drainage, north shore Oneida lake	54.50		
Coast drainage, south shore Oneida lake	28.90	166.60	1,274.55
Water-surface, Oneida lake	78.00		
Land drainage, Oneida lake	1,274.55	1,352.55	
Oneida river.			
Brewerton to Caughdenoy creek	4.80	4.80	1,357.90
Caughdenoy creek	19.30	24.10	1,376.70
Caughdenoy creek to Oak Orchard	25.10	49.20	1,401.80
Mud creek	34.70	83.90	1,436.50
Oak Orchard to Potts creek	5.00	88.90	1,441.50
Potts creek	22.90	111.80	1,464.40
Six-Mile creek	24.00	135.80	1,488.40
Potts creek to Three River Point	4.50	140.30	1,492.90

Drainage Areas Tributary to Seneca River. [a]

LOCALITY.	AREA IN SQUARE MILES.			
	Place to place.	Sub-total.	Branch total.	General total.
Mud creek.				
Head to and including Schaffer creek	51.31			
Junction with Schaffer creek to junction with Sucker brook, Victor (formerly Ganargua creek)	25.70	77.01		
Sucker brook	20.15	97.16		
Ganargua creek.				
Victor to Erie canal, Macedon	26.20	123.36		
Macedon to junction with East Red creek, East Palmyra	55.00	178.36		
East Red creek	59.50	237.86		
East Red creek to Canandaigua outlet	61.37	299.23	299.23	
Canandaigua lake.				
Naples creek	48.55	171.97		
West river	42.08			
Other land drainage	81.34			
Water-surface	16.40	....	188.37	
Canandaigua outlet.				
Foot of lake to and including Black brook	50.37	238.74		
Black brook to Flint creek, at Phelps	54.34	293.08	293.08	
Flint creek.				
Above Patten	31.59			
Patten to Gorham, not including Gorham swamp	24.84	56.43		
Gorham swamp	5.46	61.89		
Gorham to Orleans	25.57	87.46		
Orleans to junction with Canandaigua outlet at Phelps	15.21	102.67	395.75	
Phelps to junction with Ganargua creek at Lyons, forming Clyde river	48.36	444.11	743.34	

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[a] From U. S. Geological Survey topographic maps.

Drainage Areas Tributary to Seneca River — (Concluded).

LOCALITY.	AREA IN SQUARE MILES.			
	Place to place.	Sub-total.	Branch total.	General total.
Clyde river.				
Lyons to junction with Seneca river, foot of Cayuga lake	141.11	884.45	....	884.45
Seneca river.				
Seneca lake.				
Keuka lake.				
Land drainage to outlet	160.96			
Water-surface	17.51	178.47		
Keuka outlet to Seneca lake	24.80	203.27		
Catharine creek.				
Above Montour Falls	66.46	....	640.93	
Montour Falls to Seneca lake	29.91	96.37		
Watkins Glen creek	23.53	23.53		
Direct lake drainage	317.76	317.76		
Water-surface	67.16	....	708.09	
Seneca river, foot of Seneca lake to Waterloo	40.90	....	748.99	
Seneca river, Waterloo to Seneca Falls	28.55	....	777.54	
Seneca river, Seneca Falls to Mud lock, foot of Cayuga lake	7.52	....	785.06	
Cayuga lake.				
Cascadilla creek	14.38			
Six-Mile creek	59.05			
Buttermilk creek	29.16			
Cayuga inlet	67.02			
Salmon creek	91.13			
Fall creek.				
Above Freeville	58.68			
Virgil creek	26.00	84.68		
Freeville to Cornell dam	30.62	115.20		
Cornell dam to Cayuga lake	1.56	116.76		
Taghanic creek.				
Above Halseyville	56.96			
Halseyville to Taghanic Falls	10.40	67.36		
Taghanic Falls to Cayuga lake	0.39	67.75		
Other Cayuga lake drainage	275.04	720.29		
Cayuga lake, water-surface	66.31	786.60	1,571.60	
Seneca river, Cayuga lake, to junction with Clyde river	15.42	....	1,587.02	2,471.47
Seneca river, junction with Clyde river to junction with Owasco outlet	146.23	....	....	2,617.70
Owasco lake.				
Owasco inlet, above Moravia	74.33			
Moravia to Owasco lake	42.92	117.25		
Direct drainage to lake	76.24	193.49		
Foot of lake to State dam	0.98	194.47		
Water-surface..:	10.40	204.87		
Owasco outlet to junction with Seneca river	16.73	221.66	....	2,839.30
Seneca river, junction with Oswasco outlet to junction with Skaneateles outlet	98.70	....	....	2,938.60
Skaneateles lake.				
Land drainage to foot	58.41			
Water-surface	14.13	72.54		
Foot of lake to Willow Glen	1.84	74.38		
Willow Glen to Seneca river	16.69	91.07	....	3,029.07
Seneca river, Skaneateles outlet to Carpenter brook	25.50	....	....	3,054.57
Carpenter brook	18.70	....	....	3,073.27
Seneca river, Carpenter brook to Baldwinsville	48.10	....	....	3,121.37
Seneca river, Baldwinsville to Onondaga outlet	17.80	....	....	3,139.17
Onondaga lake.				
Otisco lake, land drainage to foot	41.40			
Otisco lake, water-surface	3.30	44.70		
Nine-Mile creek (Otisco outlet) to Onondaga lake	74.00	118.70		
Onondaga creek.				
Above junction with West brook	40.60			
Junction with West brook to inflow to Onondaga lake	65.30	105.90		
Other land drainage to Onondaga lake	59.10	283.70		
Onondaga lake, water-surface	4.70	288.40		
Onondaga lake, outlet to Seneca river	3.00	291.40	....	3,430.57
Seneca river, Onondaga outlet to Belgium	10.12	....	....	3,440.69
Seneca river, Belgium to Three River Point	4.40	....	....	3,445.09

Drainage Areas Tributary to Oswego River.[a]

LOCALITY.	AREA IN SQUARE MILES.		
	Place to place.	Total from Three River Point.	Total drainage basin.
Oneida river, above Three River Point	....	....	1,493.00
Seneca river, above Three River Point	....	....	3,445.00
Oswego river at Three River Point	....	....	4,938.00
Three River Point to Phoenix	2.32	2.32	4,940.32
Phoenix to Hinmansville	17.58	19.90	4,957.90
Hinmansville to Ox creek	17.05	37.15	4,975.15
Ox creek	33.68	70.83	5,008 83
Ox creek to upper dam, Fulton	9.15	79.98	5,016.98
Fulton to Neatawanta creek	9.15	89.13	5,027.13
Neatawanta creek	21.92	111.05	5,049.05
Neatawanta creek to Black creek	1.01	112.06	5,050.06
Black creek	37.93	149.99	5,087.99
Black creek to Battle Island	0.92	150.91	5,088.91
Battle Island to Minetto	2.11	153.02	5,091.02
Minetto to High dam	4.87	157.89	5,095.89
High dam to Oswego dam	1.22	159.11	5,097.11
Oswego dam to Lake Ontario	1.21	160.32	5,098.32

[a] From U. S. Geological Survey topographic maps.

OSWEGO RIVER.

The drainage area tributary to Oswego river is 160 square miles. This area comprises chiefly moderately-rolling, cultivated upland, having a good depth of soil overlying the rock, which, as a rule, is visible only in the bed of the stream. A portion of the area is drained through lakes and marshes. The run-off from the direct drainage to Oswego river is moderate and the regimen differs but little from that resulting from the inflow of the two main tributaries — the Oneida and Seneca.

OSWEGO RIVER WATER-SURFACE ELEVATION RECORDS.

In the following series of tables there are given records of the mean daily elevation of water-surface of the Oswego river at different gaging stations during the year 1912. The elevations are uniformly referred to the Barge canal datum, which is equivalent to mean tide at New York, taken to be as elevation 14.73 below the old grist mill bench-mark at Greenbush (Rensselaer).

The tables of elevation of water-surface are arranged in order, proceeding upstream from the curved dam at Oswego through to Three River Point.

The accompanying table gives details as to the types of gages used, the datum of each and the manner in which they are read.

Water-surface Elevation Gages Maintained on the Oswego River During the Year 1912.

LOCATION.	Date established.	Observer.	Elevation of zero mark (B. C. datum).	Type of gage.	Subdivision of gage.	Readings taken to
Oswego, above curved dam	April 7, 1904	D. D. Tompkins	264.23	Staff	$\frac{1}{10}$ foot	$\frac{1}{10}$ foot.
Oswego, below high dam	April 7, 1904	James J. Frisbie	279.00	Ref. point	....	....
Oswego, above high dam	April 7, 1904	James J. Frisbie	290.17	" "	....	....
Minetto, below dam	April 18, 1904	Barge canal employee	286.47	Chain	$\frac{1}{10}$ foot	$\frac{1}{10}$ foot.
Minetto, above dam	April 18, 1904	Barge canal employee	295.17	"	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Fulton, opposite Battle Island	Sept. 14, 1900	Barge canal employee	294.53	Staff	$\frac{1}{10}$ "	$\frac{1}{100}$ "
Fulton, below Battle Island dam	April 8, 1904	Barge canal employee	300.94	Chain	$\frac{1}{10}$ "	$\frac{1}{100}$ "
Fulton, above Battle Island dam	April 11, 1904	Barge canal employee	304.98	Staff	$\frac{1}{10}$ "	$\frac{1}{100}$ "
Fulton, above Battle Island dam, west side	Sept., 1911	Barge canal employee	307.96	"	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Fulton, mouth of Waterhouse creek	April 9, 1904	Barge canal employee	315.00	Ref. point	....	$\frac{1}{100}$ "
Fulton, L. H. & P. Co.'s tail-race	April 17, 1908	Barge canal employee	....	" "	....	$\frac{1}{100}$ "
Fulton, L. H. & P. Co.'s head-gates	April 17, 1908	Barge canal employee	337.50	" "	....	$\frac{1}{100}$
Fulton, L. H. & P. Co.'s head-gates	April 17, 1908	Barge canal employee	342.50	" "	....	....
Fulton, L. H. & P. Co.'s head-gates	April 17, 1908	Barge canal employee	335.90	" "	....	$\frac{1}{100}$ foot.
Fulton, above upper dam	April 9, 1904	Barge canal employee	362.40	" "	....	$\frac{1}{100}$ "
Fulton, mouth of Ox creek	April 12, 1904	B. M. Wilcox	347.71	Staff	$\frac{1}{10}$ foot	$\frac{1}{10}$ "
Phoenix, Hinmansville bridge	April 13, 1904	Leon Hallenbeck	348.64	Chain	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Phoenix, below dam	April 16, 1904	Geo. Archambo	352.95	Staff	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Phoenix, above dam	Apri 16, 1904	Barge canal employee	....	"	$\frac{1}{10}$ "	$\frac{1}{10}$ "

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Oswego River above C[illegible] Oswego, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	269.13	267.53	268.53	270.73	269.93	269.13	267.33	266.73	267.03	267.73	267.63	268.23
2.....	268.83	267.53	268.63	270.93	269.83	269.43	267.43	266.83	266.83	267.73	267.53	267.93
3.....	268.73	267.53	268.83	271.03	269.63	269.13	267.33	266.83	266.93	267.73	267.73	267.93
4.....	268.63	267.93	268.43	271.23	269.43	268.93	267.43	266.93	266.93	267.73	267.53	268.03
5.....	268.43	267.73	268.33	271.33	269.63	268.83	267.43	266.23	266.53	267.53	267.53	268.03
6.....	268.03	267.53	268.13	271.63	269.33	268.73	267.33	266.83	266.93	267.63	267.53	268.13
7.....	268.23	267.43	267.93	271.83	269.43	268.63	267.43	266.93	266.93	267.63	267.43	268.13
8.....	268.43	267.33	267.83	271.73	269.23	268.43	267.43	266.93	266.93	267.63	267.63	268.63
9.....	268.53	267.13	267.93	271.63	269.03	268.33	267.23	266.93	266.93	267.63	267.73	268.23
10.....	268.53	267.73	268.23	271.63	268.93	268.13	267.23	266.93	266.93	267.63	268.13	268.23
11.....	268.43	267.73	268.23	271.63	268.83	268.13	267.13	266.93	266.93	267.53	268.13	268.13
12.....	268.23	267.23	268.13	271.53	269.03	268.03	267.13	266.63	266.93	267.43	268.02	268.03
13.....	268.03	266.83	268.13	271.43	268.83	267.93	267.03	266.93	266.93	267.73	267.93	267.93
14.....	268.43	266.73	267.93	271.63	268.63	267.83	267.03	266.93	266.93	267.53	268.03	267.93
15.....	268.03	266.73	267.93	271.43	268.63	267.73	266.93	266.93	267.13	267.43	268.03	268.13
16.....	268.03	266.93	268.13	271.33	268.53	267.83	267.13	266.93	266.93	267.23	268.03	267.83
17.....	268.03	266.73	268.83	271.23	268.73	267.93	267.03	266.93	267.13	267.43	268.33	267.73
18.....	268.03	267.63	268.63	271.23	268.73	267.73	267.13	267.13	267.23	267.23	268.13	267.83
19.....	267.93	266.73	269.33	271.13	268.93	267.63	266.93	266.63	267.23	267.33	268.13	267.83
20.....	267.83	267.03	270.03	271.03	268.83	267.53	266.83	266.93	267.23	267.43	268.03	267.83
21.....	267.93	266.73	270.53	271.23	269.03	267.63	267.13	266.93	267.23	267.23	268.03	267.83
22.....	267.73	267.33	270.23	270.93	269.23	267.73	266.83	266.93	267.43	267.43	267.93	268.13
23.....	267.63	267.63	270.13	270.73	269.23	267.73	267.03	266.93	267.23	267.43	267.93	268.03
24.....	267.73	267.63	270.33	270.63	269.13	267.73	267.03	266.93	267.33	267.43	268.13	268.03
25.....	267.73	268.03	270.13	270.73	269.03	267.63	266.73	267.13	267.73	267.43	267.93	268.23
26.....	267.73	268.23	269.73	270.53	269.03	267.33	266.73	266.53	267.73	267.53	267.93	267.93
27.....	267.83	268.03	269.53	270.33	268.83	267.73	266.73	266.93	267.83	267.83	268.03	267.83
28.....	267.83	268.23	269.53	270.53	268.83	267.33	266.73	266.93	267.83	267.83	268.23	267.83
29.....	267.73	268.33	269.53	270.13	268.73	267.53	266.33	266.93	268.03	267.73	268.03	268.03
30.....	267.53	......	269.93	270.03	269.03	267.33	266.73	266.93	267.73	267.73	267.93	267.83
31.....	267.33	......	270.43	......	269.03	......	266.73	266.93	......	267.63	......	267.83

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Oswego River above High Dam near Oswego, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	284.97	283.97	284.87	285.27	280.77	276.67	*a*	272.15	271.75	272.95	272.75	273.75
2.....	284.87	283.87	284.97	284.37	279.97	277.07	*a*	272.10	271.70	272.75	272.85	273.85
3.....	284.87	283.87	284.77	284.37	279.17	276.87	*a*	272.65	271.55	272.65	271.35	274.35
4.....	284.87	283.77	284.97	*a*	278.37	277.17	*a*	271.55	271.85	272.45	272.25	274.25
5.....	284.77	283.87	285.07	*a*	278.97	276.37	*a*	271.45	271.15	272.40	272.30	274.35
6.....	284.67	283.87	284.97	284.37	278.17	276.17	273.05	271.85	271.65	272.25	272.35	274.55
7.....	284.67	283.97	284.87	284.67	278.17	275.97	272.90	271.75	271.65	272.35	272.75	274.50
8.....	284.67	283.97	284.87	284.27	277.87	275.47	272.95	272.00	271.65	272.40	272.85	274.25
9.....	284.67	283.97	284.87	284.27	277.17	275.57	272.75	272.15	271.60	272.65	272.95	274.45
10.....	284.57	283.87	284.87	284.27	277.17	275.37	272.60	272.65	271.65	272.45	273.15	274.65
11.....	284.47	283.77	285.17	284.27	276.87	275.22	272.65	272.05	271.75	272.35	273.55	274.65
12.....	284.47	283.97	285.07	284.17	276.37	275.07	272.45	271.85	271.55	272.35	273.65	274.55
13.....	284.17	283.97	284.97	284.07	276.07	274.97	272.45	272.00	271.60	272.15	273.50	274.65
14.....	283.97	283.87	284.77	284.07	276.17	274.67	272.75	272.15	271.65	271.95	273.40	274.65
15.....	284.17	283.77	284.97	283.97	276.17	274.52	272.55	271.95	271.60	271.55	273.25	274.05
16.....	284.27	283.77	285.17	283.67	276.07	274.57	272.55	271.90	271.45	271.50	273.30	274.05
17.....	284.07	283.77	285.37	283.57	276.27	274.47	272.35	271.95	271.95	271.95	273.35	273.95
18.....	284.07	283.57	285.97	283.47	276.17	274.07	272.35	271.85	272.25	271.75	273.55	273.95
19.....	284.17	283.67	286.87	283.32	276.97	273.87	272.15	272.00	272.30	271.95	273.75	273.95
20.....	284.07	283.77	287.27	283.17	277.17	273.07	272.95	271.95	272.35	271.75	273.75	273.75
21.....	284.17	283.77	287.57	282.87	277.77	272.57	272.15	272.05	272.35	271.65	273.55	273.65
22.....	284.17	283.87	287.27	282.97	276.97	272.42	272.25	272.10	271.75	272.25	273.55	273.55
23.....	284.07	283.77	287.37	282.67	276.67	272.67	272.55	272.15	271.90	272.15	273.55	273.65
24.....	284.07	283.87	286.97	282.57	276.97	272.57	271.95	272.65	272.45	272.05	273.35	273.85
25.....	284.07	283.67	287.07	282.37	276.67	272.42	272.15	271.55	272.65	272.15	273.55	274.05
26.....	283.97	284.37	286.87	282.17	276.37	272.17	272.05	271.35	272.80	272.30	273.75	274.15
27.....	283.97	284.57	286.77	281.87	276.57	*a*	271.95	271.75	272.95	272.75	274.15	274.35
28.....	283.87	284.87	286.67	281.57	276.57	*a*	271.75	271.85	272.95	272.85	274.00	274.45
29.....	283.97	284.97	286.67	281.37	276.67	*a*	271.95	271.95	273.05	272.65	274.00	273.75
30.....	283.97	......	287.02	281.17	276.67	*a*	271.90	271.95	273.15	272.75	273.95	273.15
31.....	283.97	......	287.17	......	277.17	......	271.85	271.90	......	272.75	......	273.75

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Oswego River below Dam at Minetto N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1......	291.81	290.61	291.31	295.71	294.71	293.61	290.91	291.57	291.37	292.47	292.47	293.77
2......	291.81	290.61	291.51	296.11	294.51	293.41	290.51	291.47	291.47	292.37	292.37	293.77
3......	291.61	290.61	291.31	296.11	294.41	293.41	290.51	291.47	291.47	292.27	292.27	293.67
4......	291.61	290.61	291.11	296.21	293.91	293.31	290.51	291.47	291.57	292.37	292.47	293.77
5......	291.51	290.61	291.31	296.21	293.81	292.91	291.01	291.47	291.57	292.27	292.57	293.77
6......	291.41	290.71	291.21	296.41	293.81	292.81	290.81	291.57	291.57	292.27	292.77	*a*
7......	291.31	290.71	291.11	296.51	293.71	292.61	290.51	291.57	291.57	292.27	292.87	*a*
8......	291.71	290.61	291.01	296.71	293.51	292.51	291.01	291.57	291.47	292.27	292.87	*a*
9......	291.61	290.61	291.11	296.71	293.41	292.31	290.91	291.57	291.57	292.17	293.07	*a*
10......	291.91	290.51	291.11	296.71	293.31	292.21	290.91	291.47	291.57	292.07	292.97	*a*
11......	291.91	290.31	291.11	296.61	293.11	292.01	290.71	291.47	291.57	291.87	293.17	*a*
12......	291.21	290.31	291.11	296.71	292.91	291.91	290.61	291.57	291.57	291.77	293.37	*a*
13......	291.31	290.11	291.11	296.51	292.81	291.81	290.47	291.57	291.57	291.57	293.57	292.87
14......	291.31	289.91	291.11	296.51	292.71	291.81	289.97	291.57	291.57	291.67	293.67	292.97
15......	291.41	290.01	291.21	296.51	292.71	291.61	290.87	291.57	291.47	291.77	293.67	292.97
16......	291.41	290.31	291.61	296.21	292.81	291.51	290.67	291.47	291.57	291.77	293.57	292.87
17......	291.31	290.31	292.01	296.31	292.91	291.41	290.67	291.57	291.57	291.77	293.47	292.87
18......	291.11	290.41	292.61	296.41	292.91	291.31	291.02	291.37	291.57	291.67	293.57	292.87
19......	291.11	289.81	294.01	295.81	293.01	291.21	291.37	291.57	291.57	291.87	293.57	293.17
20......	291.01	290.21	294.51	296.01	293.01	291.21	291.47	291.57	291.67	291.57	293.47	293.27
21......	291.01	290.21	294.71	295.81	293.31	291.31	291.47	291.57	291.57	291.57	293.47	293.37
22......	290.91	290.41	294.71	295.71	293.61	291.21	291.57	291.57	291.37	291.77	293.47	293.17
23......	290.71	290.51	294.61	295.51	293.61	291.51	291.57	291.67	291.57	291.97	293.47	293.27
24......	290.61	290.61	294.61	295.51	293.21	291.51	291.57	291.57	291.67	292.07	293.47	293.17
25......	290.51	290.71	294.21	295.41	293.21	291.31	291.57	291.07	291.67	292.27	293.57	292.97
26......	290.41	290.91	294.11	295.31	293.01	290.91	291.57	291.57	291.77	292.37	293.57	292.87
27......	290.51	291.11	293.91	295.21	293.21	290.81	291.57	291.57	291.87	292.27	293.57	292.97
28......	290.41	291.11	293.81	295.01	293.01	290.61	291.47	291.57	292.17	292.37	293.67	292.97
29......	290.61	291.31	294.01	294.91	293.01	290.81	291.47	291.57	291.97	292.57	293.77	293.07
30......	290.61	......	294.51	294.81	293.31	290.51	291.47	291.57	292.17	292.47	293.77	293.17
31......	290.61	......	294.91	......	293.41	......	291.47	291.57	......	292.47	......	293.27

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Oswego River above Dam at Minetto, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1......	300.38	299.18	299.98	302.63	301.63	300.78	299.08	296.67	295.17	298.37	297.67	298.97
2......	300.38	299.18	300.08	302.83	301.53	300.68	299.48	296.67	295.67	298.17	297.57	298.87
3......	300.28	299.18	300.08	302.93	301.33	300.68	299.48	296.57	295.97	297.97	297.57	298.87
4......	300.18	299.18	299.78	303.03	301.13	300.58	299.48	295.67	296.37	297.87	297.77	298.97
5......	300.18	299.18	299.88	303.13	301.13	300.38	299.78	295.97	296.57	297.77	297.77	299.07
6......	300.08	299.18	299.98	303.33	301.13	300.28	299.68	295.97	296.47	297.57	298.07	298.97
7......	299.98	299.18	300.08	303.43	301.03	300.18	299.18	296.27	296.57	297.67	298.07	298.97
8......	299.98	299.08	299.98	303.43	300.93	300.08	299.78	296.57	295.47	297.77	298.17	298.87
9......	299.98	298.98	299.88	303.43	300.83	299.98	299.58	296.67	296.47	297.47	298.37	298.87
10......	299.88	298.98	299.78	303.28	300.73	299.88	299.68	296.47	296.37	297.27	298.17	298.77
11......	299.78	298.88	299.78	303.38	300.63	299.78	299.88	295.47	295.97	297.07	298.37	298.67
12......	299.48	298.98	299.88	303.28	300.53	299.58	299.38	297.07	296.47	296.97	298.67	298.77
13......	299.48	298.78	299.78	303.18	300.43	299.58	299.38	296.37	296.57	296.37	298.87	298.57
14......	299.48	298.58	299.78	303.18	300.33	299.48	298.88	296.47	296.67	296.87	298.97	298.57
15......	299.58	298.68	299.88	303.18	300.33	299.28	299.78	296.57	295.77	297.07	298.97	298.57
16......	299.58	298.98	300.28	303.08	300.43	299.18	299.58	296.47	296.37	297.17	298.77	298.57
17......	299.48	298.88	300.58	303.08	300.43	299.58	299.38	296.67	296.67	297.27	298.57	298.47
18......	299.38	299.28	300.78	303.08	300.53	299.38	298.28	295.57	296.57	297.17	298.47	298.57
19......	299.38	298.48	301.38	302.98	300.53	299.18	296.68	296.67	296.87	297.47	298.57	298.67
20......	299.38	298.88	301.58	302.83	300.53	299.18	296.18	296.47	296.87	296.77	298.47	298.67
21......	299.28	298.78	301.68	302.78	300.63	299.18	295.18	296.47	296.77	297.07	298.37	298.67
22......	299.28	298.98	301.58	302.68	300.83	299.08	296.18	296.57	295.97	297.17	298.07	298.47
23......	299.18	299.28	301.48	302.58	300.93	299.28	296.98	296.67	296.87	297.47	298.07	298.57
24......	299.08	299.38	301.48	302.53	300.73	299.68	297.08	296.57	297.17	297.57	298.07	298.57
25......	298.98	299.38	301.28	302.48	300.73	299.48	296.98	295.27	297.27	297.57	298.27	298.47
26......	298.98	299.38	301.63	302.45	300.63	299.08	296.98	296.57	297.77	297.67	298.47	298.57
27......	298.98	299.78	301.63	302.28	300.63	299.48	296.68	296.67	297.97	297.17	298.57	298.57
28......	298.88	299.78	301.43	302.18	300.63	299.28	295.68	296.57	298.17	297.27	298.87	298.67
29......	298.98	299.88	301.63	302.18	300.63	299.38	296.28	296.67	297.77	297.37	298.87	298.47
30......	299.18	......	302.03	301.98	300.73	299.08	296.58	296.67	298.27	297.67	298.97	298.57
31......	299.18	......	302.33	......	300.83	......	296.58	296.77	......	297.57	......	298.57

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Oswego River opposite Battle Island.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1......	303.23	302.53	304.23	308.73	307.03	305.28	302.33	300.06	298.83	302.23	301.53	302.63
2......	303.28	302.63	304.18	309.03	306.68	305.43	301.51	300.16	300.23	301.81	301.33	302.93
3......	303.18	*a*	303.63	309.23	306.58	305.28	301.07	300.16	300.03	301.81	301.03	302.98
4......	303.23	302.33	304.38	309.33	305.83	305.13	300.53	298.79	299.95	301.69	301.58	303.09
5......	302.61	302.73	303.93	309.43	305.53	304.73	301.63	300.38	298.83	301.58	301.53	303.18
6......	302.58	*a*	303.88	309.83	306.03	304.53	301.58	300.16	299.89	300.89	301.41	303.39
7......	302.68	303.33	303.78	309.93	305.98	304.28	300.11	299.88	299.71	301.58	301.44	303.47
8......	302.83	303.33	303.63	310.03	305.53	304.03	301.73	300.11	299.43	301.53	301.83	303.49
9......	302.83	303.03	303.65	309.98	305.28	302.98	301.21	299.94	300.21	301.43	301.95	303.53
10......	302.78	302.93	302.58	309.93	305.03	303.73	301.03	300.11	300.13	301.05	302.21	303.53
11......	302.88	302.33	303.93	309.98	304.93	303.23	301.03	299.23	299.99	301.11	302.75	303.45
12......	302.43	303.03	303.73	309.88	304.23	303.13	301.08	300.83	299.93	301.05	302.53	303.09
13......	302.73	302.53	303.63	309.78	305.03	303.13	300.78	300.25	299.93	301.05	302.53	302.73
14......	302.43	302.13	303.43	309.63	304.38	302.83	299.43	300.03	299.81	301.58	302.51	302.63
15......	302.88	302.33	303.53	309.63	304.41	302.43	301.23	300.18	299.23	300.73	302.63	302.31
16......	302.83	302.33	303.88	309.53	304.23	301.55	300.88	299.95	300.27	300.73	302.59	302.63
17......	302.78	302.33	304.09	309.43	304.53	302.48	300.48	300.13	300.48	300.85	302.55	302.65
18......	302.68	302.03	305.55	309.23	304.53	302.31	300.31	298.88	300.75	300.69	302.63	302.65
19......	302.53	302.61	305.93	309.18	304.33	302.11	300.08	300.49	300.75	300.93	302.69	302.75
20......	302.93	302.38	307.33	309.98	304.98	302.01	299.75	300.43	300.76	300.23	302.61	302.83
21......	302.33	302.33	307.93	308.73	305.25	301.91	298.73	300.25	300.73	301.17	302.49	302.93
22......	303.03	302.53	307.53	308.78	305.38	301.88	301.03	300.13	300.15	300.95	302.43	302.43
23......	302.98	302.53	307.43	308.43	305.48	300.68	300.23	300.13	300.86	301.05	302.33	302.83
24......	302.98	303.18	306.93	308.23	305.18	302.51	300.33	300.18	301.05	301.03	302.18	302.93
56......	302.88	302.73	306.98	308.18	305.08	301.91	299.96	298.53	302.04	301.20	302.61	302.89
27......	302.53	303.98	306.63	308.03	304.51	301.51	300.11	299.98	302.13	301.63	302.75	302.85
28......	302.73	303.83	306.13	307.83	305.08	301.98	299.87	300.13	302.21	301.03	302.95	302.83
29......	302.03	303.98	306.03	307.23	304.68	301.23	298.63	300.13	302.35	302.08	303.03	302.48
20......	302.98	304.15	306.23	307.53	304.48	301.38	300.03	300.07	301.79	301.93	303.09	302.11
31......	302.93	......	306.95	307.23	304.73	300.68	299.65	300.01	301.88	301.83	302.98	302.55
32......	302.83	......	307.25	......	305.18	......	299.75	299.99	......	301.68	......	302.61

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Oswego River below Battle Island Dam, near Fulton, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	304.44	303.79	304.52	308.74	307.24	305.62	304.04	303.59	302.94	304.49	304.24	304.54
2.....	304.44	303.79	304.54	308.94	306.89	305.62	303.99	303.64	304.04	304.39	304.24	304.59
3.....	304.44	303.84	303.74	309.14	306.69	305.47	303.64	303.69	303.82	304.34	304.14	304.64
4.....	304.39	303.64	304.64	309.24	306.12	305.37	303.54	302.84	303.74	304.32	304.34	304.69
5.....	304.19	304.24	304.34	309.34	305.84	305.17	303.96	303.84	302.96	304.29	304.34	304.69
6.....	304.14	304.14	304.34	309.84	306.24	305.02	303.94	303.64	303.69	304.04	304.24	304.74
7.....	304.14	303.79	304.24	309.94	306.24	304.87	303.39	303.54	303.66	304.29	304.24	304.74
8.....	304.14	303.84	304.19	310.14	305.79	304.75	304.02	303.69	303.44	304.24	304.39	304.74
9.....	304.14	303.74	304.24	310.04	305.64	304.32	303.84	303.54	303.88	304.22	304.34	304.79
10.....	304.24	304.14	303.94	309.99	305.44	304.57	303.76	303.66	303.86	304.12	304.49	304.79
11.....	304.14	303.54	304.46	310.04	305.34	304.47	303.74	302.94	303.84	304.14	304.64	304.76
12.....	304.04	303.94	304.24	309.94	304.99	304.37	303.74	303.94	303.84	304.10	304.64	304.69
13.....	304.04	303.54	304.29	309.84	305.44	304.42	303.62	303.74	303.84	304.08	304.54	304.59
14.....	303.94	303.44	304.09	309.69	304.99	304.34	303.14	303.64	303.78	304.34	304.54	304.34
15.....	304.29	303.44	304.24	309.69	305.04	304.24	303.82	303.64	303.44	303.99	304.56	304.44
16.....	303.99	303.54	304.44	309.59	304.92	303.96	303.64	303.59	304.04	303.94	304.54	304.34
17.....	303.99	303.64	304.29	309.49	305.12	304.24	303.64	303.69	303.99	304.04	304.54	304.39
18.....	303.99	303.64	305.74	309.29	305.12	304.14	303.64	302.74	304.10	304.04	304.56	304.44
19.....	303.99	303.64	306.79	309.24	305.04	304.14	303.64	303.84	304.09	304.14	304.58	304.59
20.....	303.94	303.54	307.54	309.09	305.39	304.04	303.39	303.74	304.09	303.80	304.54	304.59
21.....	303.74	303.60	308.14	308.79	305.59	304.04	302.94	303.74	304.04	304.14	304.49	304.59
22.....	303.94	303.74	307.79	308.94	305.74	304.04	303.94	303.64	304.04	304.04	304.49	304.44
23.....	303.89	303.79	307.64	308.84	305.82	303.64	303.62	303.64	304.19	304.04	304.49	304.59
24.....	303.89	303.84	307.04	308.54	305.59	304.19	303.52	303.64	304.16	304.04	304.44	304.54
25.....	303.89	303.74	307.04	308.44	305.44	303.99	303.54	302.64	304.49	304.19	304.59	304.54
26.....	303.74	304.14	306.70	308.14	305.06	303.99	303.62	303.04	304.54	304.24	304.64	304.54
27.....	303.74	304.24	306.29	307.99	305.44	304.06	303.44	303.04	304.54	304.04	304.69	304.54
28.....	303.54	304.34	306.20	307.44	305.19	303.84	302.74	303.74	304.54	304.44	304.64	304.44
29.....	304.14	304.49	306.44	307.74	305.06	303.99	303.24	303.74	304.34	304.44	304.74	304.44
30.....	303.84	......	307.18	307.44	305.24	303.64	303.52	303.74	304.39	304.44	304.69	304.44
31.....	303.84	......	307.44	......	305.54	......	303.54	303.74	......	304.28	......	304.44

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Oswego River above Battle Island Dam, near Fulton, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	311.20	310.48	310.30	312.78	312.21	311.41	310.13	309.54	309.00	310.13	309.98	310.38
2	311.20	310.48	310.33	312.98	311.98	311.48	309.91	309.48	309.48	310.03	309.96	310.38
3	311.23	310.58	310.23	313.10	311.90	311.38	309.78	309.51	309.44	310.00	309.88	310.50
4	311.13	310.28	310.30	313.29	311.60	311.30	309.58	309.02	309.38	309.98	310.10	310.58
5	310.93	310.58	310.24	313.23	311.52	311.16	309.98	309.63	309.02	309.96	310.02	310.63
6	310.88	310.68	310.20	313.48	311.68	311.10	309.90	309.48	309.38	309.76	309.96	310.72
7	310.78	310.38	310.18	313.52	311.66	310.98	309.38	309.38	309.30	309.96	309.96	310.72
8	310.78	310.48	310.17	313.63	311.45	310.88	309.00	309.53	309.16	309.93	310.08	310.74
9	310.88	310.38	310.18	313.58	311.38	310.50	309.83	309.38	309.48	309.88	310.12	310.75
10	310.98	310.38	310.03	313.53	311.26	310.78	309.76	309.48	309.46	309.76	310.22	310.76
11	310.88	310.18	310.28	313.58	311.23	310.58	309.73	309.08	309.46	309.82	310.38	310.73
12	310.78	310.58	310.20	313.53	311.00	310.48	309.76	309.73	309.48	309.78	310.38	310.62
13	310.78	310.48	310.22	313.48	311.21	310.58	309.58	309.56	309.46	309.78	310.38	310.48
14	310.58	310.08	310.23	313.40	311.03	310.48	309.38	309.48	309.44	309.98	310.36	310.38
15	310.83	310.18	310.20	313.40	311.03	310.33	309.76	309.43	309.13	309.68	310.38	310.36
16	310.73	310.28	310.38	313.33	310.98	310.00	309.60	309.38	309.50	309.68	310.36	310.40
17	310.73	310.38	310.48	313.28	311.10	310.33	309.60	309.48	309.60	309.69	310.36	310.40
18	310.68	309.81	311.04	313.20	311.10	310.28	309.58	309.24	309.83	309.64	310.38	310.40
19	310.73	309.64	311.54	313.16	311.08	310.22	309.57	309.58	309.68	309.76	310.43	310.46
20	310.68	309.54	311.98	313.08	311.28	310.20	309.38	309.58	309.65	309.56	310.38	310.48
21	310.48	309.52	312.22	312.93	311.38	310.12	308.98	309.56	309.65	309.87	310.36	310.53
22	310.68	309.78	312.03	312.93	311.43	310.10	309.88	309.52	309.66	309.73	310.32	310.48
23	310.63	309.78	312.02	312.80	311.48	309.74	309.53	309.50	309.76	309.66	310.28	310.48
24	310.68	309.88	311.88	312.76	311.36	310.28	309.54	309.48	309.73	309.78	310.26	310.50
25	310.63	309.78	311.88	312.70	311.28	310.13	309.46	309.02	310.03	309.88	310.40	310.48
26	310.58	310.03	311.75	312.58	311.08	309.98	309.53	309.56	310.10	310.02	310.48	310.48
27	310.48	310.09	311.66	312.53	311.32	310.16	309.49	309.52	310.12	309.88	310.53	310.48
28	310.28	310.18	311.60	312.33	311.18	309.88	308.92	309.48	310.20	310.03	310.52	310.40
29	310.68	310.26	311.83	312.43	311.10	309.96	309.48	309.48	309.98	310.06	310.54	310.28
30	310.63	......	312.10	312.28	311.23	309.66	309.28	309.48	310.03	310.10	310.54	310.38
31	310.53	......	312.20	......	311.36	......	309.46	309.46	.....	309.98	......	310.38

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Oswego River above Battle Island Dam, West Side, near Fulton, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	311.16	310.46	310.26	312.76	312.20	311.44	310.11	309.51	308.96	310.11	309.96	310.36
2	311.24	310.46	310.29	312.98	311.98	311.48	309.89	309.51	309.46	310.01	309.92	310.36
3	311.21	*a*	310.26	313.04	311.89	311.41	309.76	309.48	309.40	309.98	309.84	310.51
4	311.06	310.26	310.41	313.14	311.56	311.31	309.56	309.00	309.38	309.96	310.08	310.56
5	310.91	310.56	310.26	313.18	311.48	311.16	309.96	309.51	308.96	309.94	310.02	310.61
6	310.86	*a*	310.22	313.44	311.66	311.11	309.88	309.46	309.36	309.74	309.94	310.68
7	310.76	310.46	310.21	313.46	311.64	310.98	309.38	309.36	309.26	309.94	309.94	310.70
8	310.76	310.46	310.16	313.61	311.46	310.89	309.98	309.51	309.12	309.91	310.07	310.71
9	310.76	310.36	310.21	313.56	311.40	310.51	309.80	309.36	309.44	309.86	310.12	310.73
10	310.96	310.36	310.06	313.52	311.26	310.79	309.76	309.46	309.44	309.74	310.20	310.74
11	310.86	310.16	310.16	313.56	311.21	310.56	309.66	309.06	309.44	309.80	310.38	310.70
12	310.76	310.56	310.24	313.50	310.98	310.51	309.74	309.71	309.46	309.76	310.36	310.58
13	310.76	310.36	310.31	313.46	311.26	310.59	309.58	309.52	309.42	309.76	310.36	310.46
14	310.66	310.06	310.26	313.38	311.04	310.46	309.36	309.46	309.42	309.96	310.34	310.36
15	310.81	310.16	310.26	313.38	311.04	310.34	309.74	309.39	309.11	309.66	310.36	310.32
16	310.81	310.26	310.41	313.31	310.98	309.98	309.59	309.36	309.46	309.66	310.36	310.38
17	310.71	310.36	310.52	313.26	311.12	310.31	309.58	309.46	309.58	309.66	310.34	310.38
18	310.76	309.46	311.00	313.18	311.12	310.26	309.56	309.22	309.81	309.62	310.36	310.38
19	310.71	309.82	310.48	313.14	311.08	310.20	309.54	309.56	309.66	309.74	310.40	310.44
20	310.66	309.64	311.92	313.08	311.26	310.18	309.34	309.56	309.63	309.54	310.34	310.46
21	310.46	309.60	312.26	312.91	311.41	310.14	309.94	309.54	309.63	309.84	310.34	310.51
22	310.66	309.76	312.04	312.91	311.44	310.08	309.81	309.50	309.64	309.71	310.30	310.46
23	310.61	309.84	312.06	312.78	311.51	309.71	309.51	309.48	309.74	309.64	310.26	310.46
24	310.66	309.91	311.90	312.74	311.36	310.28	309.54	309.46	309.71	309.76	310.24	310.48
25	310.61	309.84	311.96	312.71	311.31	310.11	309.42	308.98	310.01	309.86	310.38	310.46
26	310.51	310.16	311.80	312.56	311.08	309.98	309.50	309.54	310.06	310.00	310.46	310.48
27	310.46	310.16	311.66	312.51	311.34	310.16	309.42	309.50	310.10	309.86	310.51	310.46
28	310.46	310.16	311.64	312.31	311.18	309.86	308.88	309.44	310.18	310.01	310.52	310.38
29	310.71	310.32	311.76	312.41	311.11	309.94	309.46	309.44	309.96	310.04	310.54	310.26
30	310.66	......	312.08	312.26	311.24	309.64	309.26	309.44	310.01	310.08	310.54	310.36
31	310.51	......	312.20	......	311.36	......	309.41	309.44	......	309.98	......	310.36

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Oswego River at Mouth of Water house Creek, Fulton, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	311.07	310.57	310.37	313.57	312.77	311.22	310.02	309.27	308.77	310.17	310.02	310.57
2.....	310.87	310.57	310.47	313.77	312.67	311.72	309.87	309.32	308.87	309.97	309.97	310.47
3.....	311.17	310.57	310.27	313.97	312.42	311.57	309.82	309.32	309.27	309.92	309.72	310.57
4.....	311.17	310.47	310.67	313.97	312.17	311.32	309.57	308.82	309.37	309.97	309.87	310.67
5.....	310.67	310.57	310.47	313.97	312.17	311.57	310.12	309.57	308.97	309.92	309.92	310.62
6.....	310.97	310.47	310.42	314.42	312.17	311.37	309.87	309.27	309.37	309.72	309.92	310.72
7.....	310.97	310.37	310.37	314.47	312.12	311.22	309.42	309.27	309.27	309.02	309.97	310.67
8.....	310.97	310.57	310.47	314.67	311.87	311.12	310.02	309.32	308.97	309.92	310.12	310.72
9.....	310.97	310.37	310.57	314.62	311.72	310.62	309.72	309.27	309.42	309.92	310.12	310.87
10.....	310.97	310.47	310.17	314.62	311.67	310.97	309.67	309.37	309.37	310.02	310.12	310.87
11.....	310.97	310.17	310.67	314.62	311.62	310.77	309.74	308.97	309.32	309.92	310.27	310.87
12.....	310.77	310.57	310.52	314.57	311.47	310.72	309.67	309.42	309.32	309.92	310.32	310.67
13.....	310.97	310.27	310.47	314.47	311.47	310.72	309.67	309.42	309.22	309.62	310.42	310.67
14.....	310.77	310.17	310.52	314.37	311.32	310.57	308.92	309.37	309.27	309.97	310.42	310.47
15.....	310.87	310.12	310.47	314.27	311.37	310.52	309.72	309.37	309.07	309.77	310.27	310.32
16.....	310.87	310.27	310.67	314.32	311.17	311.97	309.57	309.42	309.42	309.62	310.47	310.47
17.....	310.77	310.17	310.67	314.17	311.37	310.77	309.47	309.52	309.42	309.77	310.32	310.42
18.....	310.87	309.77	311.87	314.12	311.37	310.57	309.52	309.17	309.67	309.17	310.52	310.42
19.....	310.87	309.77	312.27	314.07	311.27	310.22	309.57	309.32	309.52	309.72	310.42	310.37
20.....	310.57	309.57	312.87	313.97	311.60	310.42	309.47	309.47	309.62	309.42	310.47	310.52
21.....	310.97	309.77	313.17	313.57	311.67	310.22	308.97	309.47	309.57	309.77	310.47	310.47
22.....	310.97	309.87	313.17	313.67	311.77	310.22	309.67	309.37	309.57	309.77	310.37	310.57
23.....	310.67	309.87	313.17	313.57	311.77	309.77	309.32	309.37	309.47	309.77	310.32	310.54
24.....	310.77	309.87	312.67	313.37	311.97	310.47	309.37	309.37	309.57	309.77	310.27	310.47
25.....	310.67	309.57	312.77	313.37	311.67	310.12	309.42	308.97	309.92	309.92	310.57	310.42
26	310.42	310.47	312.47	313.47	311.47	309.97	309.37	309.27	309.92	309.72	310.27	310.42
27.....	310.57	310.22	312.27	313.17	311.72	310.27	309.32	309.47	310.17	309.77	310.52	310.47
28.....	310.22	310.47	312.17	312.87	311.42	310.27	308.87	309.42	310.22	310.17	310.57	310.37
29.....	310.97	310.47	312.17	312.07	311.37	309.97	309.47	309.32	309.92	310.07	310.57	310.32
30.....	310.67	.....	312.62	312.77	311.47	310.37	309.22	309.32	310.17	310.02	310.47	310.52
31.....	310.57	......	312.62	.....	311.62	......	309.32	309.37	......	309.97	......	310.47

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Oswego River above Oswego Falls Dam, Fulton, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	349.00	346.70	348.20	351.60	351.10	350.10	347.50	347.20	347.10	354.30	353.70	356.00
2.....	348.60	346.70	348.40	352.00	351.50	351.00	347.10	347.20	347.00	353.25	353.55	355.95
3.....	348.60	346.70	349.30	352.20	351.10	351.60	347.10	347.20	346.70	352.80	353.80	355.95
4. ...	348.40	348.20	347.90	352.30	350.40	351.00	348.70	346.60	347.40	352.65	353.90	356.00
5.....	347.60	346.60	348.40	352.40	351.30	349.80	347.90	347.60	350.00	352.75	353.50	356.05
6.....	347.60	346.70	348.00	352.80	350.40	349.50	347.50	347.05	349.90	353.30	353.50	356.25
7.....	348.30	346.60	347.90	353.10	350.30	349.40	348.60	347.00	349.50	353.50	353.40	356.25
8.....	348.84	346.50	347.60	353.20	350.00	349.20	347.50	347.00	349.80	352.80	353.80	356.30
9.....	348.80	347.80	347.60	353.10	349.70	349.80	347.10	347.00	348.55	352.95	354.10	356.30
10.....	348.80	346.70	349.00	353.10	349.60	348.90	346.90	346.90	350.10	352.80	354.60	356.35
11.....	348.00	347.80	348.00	353.00	349.60	348.80	346.90	347.70	349.90	352.60	354.90	356.35
12.....	347.60	346.30	347.80	353.00	350.40	348.80	347.50	347.70	349.80	352.65	354.80	356.15
13.....	347.10	345.60	347.80	352.80	349.50	348.60	346.60	346.80	349.50	352.40	354.80	356.15
14.....	348.70	345.40	347.80	353.10	349.60	348.30	348.10	346.80	349.70	352.35	355.00	356.00
15.....	347.30	346.60	347.70	352.80	349.30	348.50	347.30	347.00	349.90	351.80	355.40	355.60
16.....	347.00	346.50	348.20	352.70	349.70	349.20	346.70	347.00	350.20	352.25	355.50	355.75
17.....	346.80	346.70	349.40	352.60	349.30	349.70	347.20	347.00	350.70	351.90	355.30	355.90
18.....	346.80	347.30	349.20	352.60	349.30	348.30	347.20	347.70	350.70	352.75	355.50	355.40
19.....	346.80	346.50	350.10	352.50	350.40	348.20	347.10	347.40	352.50	352.80	355.90	355.50
20.....	346.80	346.70	350.40	352.40	349.70	348.20	347.20	346.80	352.60	352.60	355.60	355.40
21.....	348.10	347.50	351.00	352.60	349.70	348.00	347.40	346.80	352.40	352.15	355.50	355.60
22.....	346.60	347.90	350.60	352.10	349.80	348.00	347.40	346.90	352.60	352.65	355.50	355.90
23.....	347.00	347.20	350.60	352.20	350.00	348.80	347.10	346.90	352.50	351.80	355.60	355.60
24.....	346.80	347.00	351.50	352.00	349.60	348.30	346.50	347.20	352.90	352.80	355.50	355.60
25.....	346.60	348.70	350.40	351.80	349.70	348.10	346.70	347.70	354.10	352.65	355.70	355.30
26.....	346.30	347.30	350.20	351.50	349.60	347.75	346.90	347.40	354.30	353.10	356.10	355.30
27.....	346.60	347.40	350.30	351.80	349.90	348.20	347.00	347.00	354.30	353.30	356.10	355.50
28.....	348.20	347.20	350.10	352.10	349.60	347.50	347.10	346.90	353.50	353.60	356.10	355.25
29.....	347.00	348.30	350.00	351.10	349.60	347.90	346.60	346.90	353.50	353.55	356.10	355.25
30.....	346.90	......	350.70	351.10	349.70	348.50	346.80	346.90	354.75	353.40	355.95	355.15
31.....	346.60	......	351.70	......	350.10	......	347.10	346.90	......	353.70	......	355.05

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Oswego River at Mouth of Ox Creek, near Fulton, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	351.51	349.81	350.31	353.81	353.01	351.71	348.51	347.61	347.61	353.71	354.11	355.81
2.....	351.31	349.21	350.41	354.31	352.91	352.11	348.11	347.51	347.51	353.31	354.01	355.91
3.....	351.21	349.11	350.81	354.41	352.51	351.61	348.11	347.71	348.31	353.11	353.91	356.11
4.....	350.91	349.41	350.51	354.61	352.21	351.11	349.21	347.31	347.51	352.91	354.01	356.21
5.....	350.71	349.31	350.31	354.81	352.41	351.01	348.31	347.51	349.91	352.91	354.01	356.21
6.....	350.71	349.21	350.11	355.21	352.21	350.91	348.11	347.41	349.91	353.71	353.91	356.41
7.....	350.71	349.11	350.01	355.41	351.81	350.51	348.81	347.41	349.71	353.81	353.81	356.41
8.....	350.41	349.01	350.01	355.51	351.71	350.61	348.31	347.61	350.01	353.21	354.11	356.41
9.....	350.61	348.91	350.01	355.41	351.51	351.01	348.11	347.61	349.71	353.21	354.81	356.41
10.....	350.81	348.71	350.21	355.41	351.31	350.11	348.01	347.51	350.51	353.21	355.21	356.41
11.....	350.21	348.61	350.01	355.41	351.11	350.01	347.81	347.41	350.21	353.01	355.11	356.41
12.....	349.91	348.41	350.01	355.41	351.41	349.91	347.81	347.51	350.01	353.01	355.21	356.41
13.....	349.71	348.21	350.01	355.31	351.21	349.91	347.91	347.51	349.91	352.81	355.31	356.41
14.....	349.91	348.21	350 01	355.31	350.91	349.61	348.61	347.51	349.81	352.71	355.41	355.91
15.....	349.71	348.31	350.11	355.21	350.81	349.51	347.91	347.51	349.81	352.21	355.61	355.61
16.....	349.51	348.31	350.51	355.21	350.91	350.51	347.81	347.51	350.51	352.71	355.71	355.81
17.....	349.41	348.31	351.41	355.01	350.91	349.51	347.81	347.51	351.21	352.71	355.51	355.91
18.....	349.51	348.21	351.71	354.91	350.71	349.51	347.81	347.91	351.61	353.01	355.71	355.81
19.....	349.41	348.31	352.81	354.91	351.11	349.31	347.81	347.51	352.81	353.11	355.71	355.71
20.....	349.61	348.21	353.51	354.71	351.21	349 31	347.81	347.51	352.91	353.11	355.61	355.61
21.....	349.61	348.31	354.01	354.61	351.41	349.21	348.71	347.51	352.81	352.71	355.61	355.71
22.....	349.61	348.91	353.61	354.41	351 61	349.11	347.91	347.71	352.71	352.51	355.51	355.71
23.....	349.51	349.21	353.41	354.21	351.41	349.41	347.91	347.51	352.91	352.71	355.61	355.71
24.....	349.41	349.21	353.41	354.11	351.41	349.11	347.81	347.51	353.21	352.91	355.71	355.71
25.....	349.41	349.91	352.91	354.01	351.41	349.01	347.61	347.91	354.41	353.11	355.91	355.51
26.....	349.11	349.71	352.61	353.81	351.61	349.21	347.61	347.71	354.71	353.71	356.11	355.51
27.....	349.21	350.01	352.01	353.61	351.41	348.71	347.71	347.51	354.61	353.71	356.21	355.51
28.....	349.41	350.21	352.01	353.71	351.11	348.41	348.21	347.41	353.81	353.71	356.21	355.41
29.....	349.71	350.41	352.21	353 31	351.01	348.61	347.71	347.51	353.71	353.71	356.11	355.21
30.....	349.51	......	352.91	353.21	351.41	349.21	347.41	347.41	354.11	354.01	356.01	355.41
31.....	349.41	......	352.41	......	351.51	......	347.51	347.41	......	354.01	......	355.51

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Oswego River at Hinmansville Bridge, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	353.64	354.14	355.04	357.14	356.14	354.54	350.84	349.94	349.34	353 94	354.34	356.24
2.....	353.34	354.14	354.94	357.74	355.84	354.84	350.94	349.84	350.04	353.84	354.44	356.44
3.....	353.54	353.94	354.74	358.14	355.24	354.64	350.84	349.64	350.24	353.64	354.44	356.44
4.....	353.54	353.24	354.84	358.24	355.04	354.54	351.04	349.14	350.54	353.94	354.64	356.54
5.....	353.44	353.44	354.64	358.34	354.94	355.04	351.24	350.34	350.64	353.64	354.34	356.64
6.....	353.54	353.94	354.54	358.64	355.14	353.94	350.74	350.14	350.64	353.34	354.54	356.74
7.....	353.94	354.14	354.34	358.74	354.94	353.54	351.04	350.14	350.54	353.54	354.74	356.84
8.....	354.34	353.84	354.14	358.94	354.74	353.44	350.94	350.14	350.34	353.64	354.94	356.64
9.....	*a*	353.64	354.04	358.94	354.54	353.44	350.94	350.24	350.54	353.94	355.24	356.94
10.....	*a*	353.34	354.44	358.94	354.34	353.04	350.94	350.14	350.34	353.54	355.14	356.84
11.....	*a*	353.14	354.24	358.94	354.14	352 84	350.74	349.44	350.64	353.34	355.34	356.84
12.....	*a*	352.94	354.24	358.94	353.94	352.54	350.64	350.14	350.54	353.14	355.64	356.54
13.....	*a*	352.94	354.14	358.84	353 84	352.34	350.54	350.14	350.54	352 94	355.54	356.44
14.....	*a*	352.94	354.14	358.84	353.74	352.14	350.14	350.44	350.64	352.74	355.84	356.34
15.....	*a*	352.94	354.14	358.74	353.84	352.34	350.54	350.54	350.54	353.14	355.94	356.24
16.....	*a*	352.94	354.44	358.64	353.94	352.34	350.44	350.34	351.14	353.34	355.94	356.34
17.....	355.64	352.94	354.94	358.54	353.84	352.04	350.34	350.34	351.54	353.04	355.74	*a*
18.....	355.44	353.34	355.74	358.44	353.74	351.74	350.14	349.44	351.94	352.74	355.94	*a*
19.....	355.04	353.44	356.34	358.34	353.94	351.64	349.94	350.14	353.14	352.64	355.94	*a*
20.....	354.94	353.14	356.44	358.14	354.14	351.54	349.84	350.34	353.14	352.94	355.84	*a*
21.....	354.54	353.44	356.94	358.04	354.34	351.54	349.44	350.34	352.94	*a*	355.94	356.24
22.....	354.44	353.54	356.74	357.84	354.54	351.34	349 94	350.34	352.74	*a*	356.04	356.04
23.....	354.64	353.54	356.44	357.74	354.34	351.14	349.84	350.34	352.94	353.24	355.94	355.84
24.....	354.64	353.74	356.04	357.64	354.04	350.94	349.94	350.34	353.44	353.34	355.74	355.64
25.....	354.34	354.14	355.94	357.44	354.04	351.04	349.74	349.14	354.84	353.54	355.94	355.54
26.....	353.94	354.54	355.64	357.24	353.84	350.94	349.64	349.94	354.94	353.64	356.14	355.64
27.....	353.94	355.04	355.34	356.94	354.14	350.94	349.54	350.14	354.84	353.34	356.34	355.74
28.....	353.54	355.04	355.14	356.74	354.04	350.84	349.14	350.34	354.24	354.14	356.54	355.54
29.....	353.64	355.04	355.44	356.64	354.34	351.14	349.64	350.44	354.04	354.24	356.64	355.54
30.....	354.24	......	355.84	356.54	354.54	350.94	350.14	350 34	354.24	354.24	356.54	355.74
31.....	354.14	......	356.34	......	354.44	......	350.14	350.24	......	354.34	......	355.04

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Oswego River below Dam at Phoenix, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	354.85	355.85	356.45	360.85	359.05	357.35	354.15	353.95	353.45	354.55	355.05	357.45
2.....	354.95	355.25	356.45	361.95	358.65	357.45	354.15	353.75	353.45	354.65	355.05	357.35
3.....	355.35	355.15	356.05	362.75	358.15	357.35	354.05	353.75	353.45	354.75	354.95	357.45
4.....	355.85	355.15	355.85	362.85	357.85	356.95	353.95	353.65	353.35	354.65	355.05	357.45
5.....	356.35	355.15	355.95	363.15	358.05	356.75	353.95	353.55	353.35	354.65	355.15	357.45
6.....	358.35	354.95	355.75	363.45	357.95	356.45	353.95	353.55	353.35	354.75	355.85	357.55
7.....	358.35	354.85	355.55	363.85	357.85	356.05	354.25	353.55	353.35	354.75	355.45	357.65
8.....	358.45	354.75	355.45	363.95	357.65	355.65	354.15	353.55	353.45	354.65	355.65	357.75
9.....	358.65	354.65	355.35	364.05	357.35	355.85	354.15	353.55	353.35	354.65	355.75	357.65
10.....	358.75	354.75	355.15	364.10	357.15	355.55	354.05	353.55	353.35	354.65	355.95	357.65
11.....	357.65	354.35	355.55	364.10	357.05	355.25	354.05	353.45	353.35	354.65	356.05	357.65
12.....	357.55	353.85	355.75	364.05	356.85	354.95	354.05	353.45	353.35	354.75	356.15	357.45
13.....	357.45	353.35	355.75	363.95	356.65	354.85	353.95	353.45	353.45	354.65	356.25	357.35
14.....	357.35	353.55	355.85	363.85	356.55	354.65	353.95	353.45	353.45	354.65	356.45	357.15
15.....	357.25	353.75	355.95	363.65	356.45	354.75	353.95	353.45	353.45	354.65	356.45	357.25
16.....	357.15	353.75	356.45	363.65	356.45	354.95	353.95	353.45	353.45	354.75	356.65	357.25
17.....	357.05	353.65	357.55	363.45	356.55	354.65	353.95	353.45	353.45	354.75	356.65	357.15
18.....	356.75	353.01	358.65	363.25	356.65	354.45	353.95	353.45	353.45	354.75	356.85	357.15
19.....	356.55	353.75	358.95	363.15	356.95	354.35	353.95	353.45	353.45	354.75	356.85	357.05
20.....	356.35	353.25	359.65	362.95	357.05	354.05	353.95	353.35	353.45	354.75	356.95	356.95
21.....	356.25	353.25	359.85	362.85	357.25	353.85	354.05	353.35	353.45	354.85	356.95	356.95
22.....	356.15	354.15	359.55	362.55	357.45	353.65	354.05	353.35	353.75	354.85	356.95	356.85
23.....	355.95	354.45	359.25	362.35	357.25	354.15	353.95	353.35	353.75	354.85	357.05	356.85
24.....	355.75	354.95	358.85	362.05	357.25	354.05	353.95	353.35	353.95	354.95	357.15	356.75
25.....	355.65	354.65	358.75	361.85	357.25	353.95	353.95	353.45	354.05	354.95	357.85	356.75
26.....	355.45	355.15	358.45	361.75	356.95	354.05	353.95	353.45	354.05	354.95	357.35	356.65
27.....	355.25	355.75	358.25	361.55	356.35	353.95	353.95	353.45	354.15	354.85	357.45	356.55
28.....	355.25	356.05	358.15	360.85	355.95	353.95	354.15	353.45	354.25	354.95	357.25	356.55
29.....	355.35	356.35	358.65	360.05	356.85	353.95	354.15	353.45	354.45	354.95	357.25	356.55
30.....	355.35	......	359.25	359.45	357.05	354.25	354.05	353.55	354.35	355.05	357.25	356.65
31.....	355.35	......	359.75	......	357.15	......	354.05	353.55	......	355.05	......	356.75

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Oswego River above Dam at Phoenix, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	363.03	361.63	364.23	365.73	363.63	364.63	363.43	362.93	363.10	363.90	364.10	364.50
2.....	363.13	361.43	364.13	366.03	363.53	364.23	363.43	362.83	363.20	363.90	363.90	364.40
3.....	363.03	361.23	364.33	366.03	364.03	363.73	363.53	362.83	363.10	364.00	364.00	364.30
4.....	362.93	361.63	364.13	366.03	364.13	363.43	363.53	363.33	363.00	363.90	363.80	364.40
5.....	363.13	361.23	364.03	366.03	364.23	363.13	363.33	363.13	363.00	363.90	*a*	364.60
6.....	363.03	360.93	363.93	366.03	363.53	363.23	363.43	363.13	363.00	364.00	363.70	364.60
7.....	*a*	360.83	363.93	366.33	363.83	363.03	363.73	363.13	363.10	364.00	363.70	364.60
8.....	363.03	360.63	363.83	366.33	363.63	362.93	363.53	363.03	363.30	363.80	363.90	364.80
9.....	362.48	360.43	363.83	366.43	363.53	362.63	363.53	363.03	363.10	363.70	364.10	364.70
10.....	362.33	360.63	364.13	366.33	363.53	362.93	363.33	363.03	363.10	363.70	364.40	364.70
11.....	362.83	361.13	363.93	366.33	363.53	362.93	363.43	363.53	363.00	363.70	364.20	364.60
12.....	362.83	361.13	363.83	366.33	363.73	362.63	363.33	363.33	363.00	363.60	364.20	364.50
13.....	362.63	361.73	363.93	366.23	363.53	362.03	363.13	363.33	363.00	363.80	364.20	364 20
14.....	*a*	362.13	363.93	366.23	363.53	362.93	363.53	363.23	362.90	363.80	364.20	364.60
15.....	362.63	362.23	364.03	365.93	363.43	362.93	363.43	363.03	*a*	363.80	364.30	364.20
16.....	362.33	362.13	364.43	365.63	363.53	363.03	363.13	363.03	363.50	363.70	364.30	364.30
17.....	362.13	362.03	364.83	365.53	363.53	363.23	363.53	363.03	363.50	363.70	364.40	364.20
18.....	362.13	362.63	364.73	365.33	363.53	362.83	363.43	363.43	362.80	363.80	364.40	364.20
19.....	361.93	362.33	365.23	365.13	363.63	363.03	363.33	363.23	363.30	363.80	364.20	364.20
20.....	361.93	362.83	365.33	365.03	363.53	362.93	363.23	363.13	363.30	363.70	364.20	364.40
21.....	362.33	363.13	365.23	364.93	363.63	363.03	363.33	363.23	363.30	363.80	364.20	364.30
22.....	361.98	363.33	365.23	364.83	363.83	363.23	363.23	363.23	363.50	363.80	364.20	364.40
23.....	361.93	363.53	365.13	364.73	364.13	363.63	362.93	363.03	363.30	363.80	364.10	364.30
24.....	361.63	363.73	365.23	364.63	364.13	363.63	363.03	363.03	363.40	363.70	364.40	364.20
25.....	361.93	363.93	365.03	364.63	364.03	363.03	362.93	363.23	363.90	363.90	364.30	364.50
26.....	362.23	364.03	364.93	364.73	364.23	363.23	362.93	363.23	363.90	364.00	364.30	364.30
27.....	362.03	363.93	364.73	364.63	364.03	363.33	*a*	363.03	364.00	364.10	364.30	364.20
28.....	362.33	364.13	364.73	364.63	364.33	363.43	363.13	363.03	364.10	364.20	364.40	364.30
29.....	361.93	364.13	364.93	364.43	364.53	363.23	363.13	363.03	364.20	364.10	364.30	364.20
30.....	361.83	......	365.13	364.23	364.73	363.63	363.03	362.73	364.00	364.10	364.30	364.20
31.....	361.73	......	365.63	......	364.83	......	363.03	362.63	......	364.10	......	364.10

No record.

OSWEGO RIVER OPPOSITE BATTLE ISLAND, NEAR MINETTO, N. Y.

A gage was established September 14, 1900, on the Oswego river opposite Battle Island. This station was maintained by the United States Geological Survey in coöperation with this Department. The results may be found in the supplement of the report of the State Engineer and Surveyor of New York for 1902, pages 86–91; for 1903, pages 41–42, and for 1904, pages 512–513. The gage readings were discontinued in 1905. On May 25, 1907, a gage was erected by this Department on the right-hand bank of the Oswego river opposite Battle Island and directly across the stream from the former gage.

The discharge for the year 1907 has not been taken out. On April 26, 1908, a new gage was erected on the left-hand side of the stream, the same side as that on which the old U. S. Geological Survey gage was located, but at a point about 400 feet further upstream. This gage is a ⅞-in. by 6-in. board, subdivided to feet and tenths, reading from 5 to 15 feet. It is spiked to a 4-in. by 6-in. post set in the ground, the upper end of which is bolted to a slanting tree. The zero mark of the gage is at elevation 294.53. The zero mark of the old U. S. Geological Survey gage nearby was at elevation 298.16, Barge canal datum. The discharge is calculated from the rating determined in connection with the old U. S. Geological Survey gage, the gage readings being corrected by subtracting 3.67 to reduce them to equivalent readings of the U. S. Geological Survey gage.

During 1912, the gage opposite Battle Island has been read by a Barge canal employee, readings being taken each morning and night. The stream freezes over in part, but no winter discharge measurements are available and the flow for the winter months has been computed from the open water rating table. The winter records for former years, determined in the same manner, probably give somewhat excessive run-off for some months.

Mean Daily Discharge, Second-feet, of Oswego River opposite Battle Island, near Minetto, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	7,593	6,262	9,608	*b*	15,732	11,820	5,908	2,635	1,555	5,733	4,585	6,448
2.....	7,690	6,448	9,505	*b*	14,924	12,150	4,510	2,745	2,855	4,980	4,290	7,008
3.....	7,495	*a*	8,390	*b*	14,700	11,820	3,860	2,745	2,635	4,980	3,860	7,105
4.....	7,593	5,908	9,915	*b*	13,022	11,498	3,205	1,520	2,525	4,820	4,660	7,300
5.....	6,355	6,633	8,992	*b*	12,370	10,642	4,740	3,020	1,555	4,660	4,585	7,495
6.....	6,355	*a*	8,890	*b*	13,467	10,225	4,660	2,745	2,470	3,660	4,360	7,890
7.....	6,540	7,790	8,690	*b*	13,355	9,710	2,690	2,470	2,280	4,660	4,435	7,990
8.....	6,818	7,790	8,390	*b*	12,370	9,198	4,900	2,690	2,045	4,585	5,055	8,090
9.....	6,818	7,203	8,390	*b*	11,820	7,105	4,070	2,525	2,800	4,435	5,215	8,190
10.....	6,725	7,008	6,355	*b*	11,280	8,590	3,860	2,690	2,745	3,860	5,645	8,190
11.....	6,910	5,908	8,992	*b*	11,060	7,593	3,860	1,870	2,580	3,930	6,633	7,990
12.....	6,083	7,203	8,590	*b*	9,608	7,398	3,930	3,595	2,525	3,860	6,262	7,300
13.....	6,633	6,262	8,390	*b*	11,280	7,398	3,530	2,855	2,525	3,860	6,262	6,633
14.....	6,083	5,558	7,990	*b*	9,915	6,818	2,045	2,635	2,380	4,660	6,170	6,448
15.....	6,910	5,908	8,190	*b*	9,915	6,083	4,145	2,800	1,870	3,465	6,448	5,820
16.....	6,818	5,908	8,890	*b*	9,608	4,585	3,660	2,525	2,855	3,465	6,355	6,448
17.....	6,725	5,908	9,300	*b*	10,225	6,170	3,140	2,745	3,140	3,595	6,262	6,448
18.....	6,540	5,385	12,370	*b*	10,225	5,820	2,910	1,590	3,465	3,400	6,448	6,448
19.....	6,262	6,355	13,242	*b*	9,812	5,470	2,690	3,140	3,465	3,725	6,540	6,633
20.....	7,008	5,995	16,400	*b*	11,170	5,300	2,330	3,080	3,465	2,855	6,355	6,818
21.....	5,908	5,908	17,840	*b*	11,712	5,130	1,485	2,855	3,465	4,000	6,170	7,008
22.....	7,203	6,262	16,880	*b*	12,040	5,130	3,860	2,745	2,745	3,725	6,083	6,083
23.....	7,105	6,262	16,640	*b*	12,260	3,400	2,855	2,745	3,595	3,860	5,908	6,818
24.....	7,105	7,495	15,496	*b*	11,605	6,170	2,965	2,800	3,860	3,860	5,645	7,008
25.....	6,910	6,633	15,614	*b*	11,390	5,130	2,525	1,345	5,385	4,070	6,355	6,910
26.....	6,262	9,095	14,812	*b*	10,120	4,510	2,690	2,580	5,558	4,740	6,633	6,818
27.....	6,633	8,790	13,692	17,600	11,390	5,300	2,425	2,745	5,645	3,860	7,008	6,818
28.....	5,385	9,095	13,467	16,180	10,540	4,145	1,415	2,745	5,908	5,470	7,203	6,170
29.....	7,105	9,403	13,916	16,880	10,120	4,360	2,635	2,635	4,980	5,215	7,300	5,470
30.....	7,008	......	15,496	16,180	10,642	3,400	2,230	2,580	5,130	5,055	7,105	6,262
31.....	6,818	......	16,180	......	11,605	......	2,330	2,580	......	4,820	......	6,355
Mean..	6,755	6,829	11,597	......	11,590	7,069	3,292	2,612	3,267	4,253	5,861	6,917

a No record. *b* Gage heights beyond limit of rating table.

Monthly Discharge of Oswego River opposite Battle Island, near Minetto, N. Y.

[Drainage area, 4,900 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1912.					
January	7,690	5,385	6,755	1.38	1.59
February	9,403	5,385	6,829	1.39	1.50
March	17,840	6,355	11,597	2.37	2.73
April *a*	....	....	....	....	....
May	15,732	9,608	11,590	2.37	2.73
June	12,150	3,400	7,069	1.44	1.61
July	5,908	1,415	3,292	0.672	0.775
August	3,595	1,345	2,612	0.533	0.614
September	5,908	1,555	3,267	0.667	0.744
October	5,733	2,855	4,253	0.868	1.00
November	7,300	3,860	5,861	1.20	1.34
December	8,190	5,470	6,917	1.41	1.63

a Beyond limit of rating curve.

ONEIDA RIVER DRAINAGE BASIN.

Oneida lake has a water-surface area of 80 square miles and lies at an elevation of 370 feet above tide. The drainage basin within a radius of ten miles to the south and west is relatively flat, with numerous swampy tracts. The lake receives, through Chittenango and Oneida creeks, drainage from an extensive area of the central New York plateau and, through Wood and Fish creeks on the east, drainage from a portion of the west slope of the plateau bordering the Adirondack mountains. On the north the drainage area is less extensive and the inflowing streams are small.[a]

The outflow from the lake through Oneida river joins Seneca river at Three River Point, forming Oswego river. From Brewerton to Three River Point the distance, in a straight line, is but eight miles; following the windings of the stream it is sixteen miles.

Oneida river will be canalized in connection with the Barge canal work. Two large and two smaller bends will be cut off, the largest cut-off being opposite Caughdenoy. The system of eel weirs formerly located in the river at Caughdenoy has been replaced by a substantial masonry dam. A lock has also been placed in the cut-off channel, the object of the dam and lock being to maintain the water at a navigable depth in the canal and river above the lock to the foot of Oneida lake at Brewerton. The dam at Oak Orchard has been removed, and the low navigable stage of the stream from Three River Point up to Lock 26, located in the cut-off at Caughdenoy, will be 363.0, or the same as the pool level in Oswego river from Phoenix to Three River Point.

WATER-SURFACE ELEVATION RECORDS FOR ONEIDA RIVER AND TRIBUTARIES.

The following series of tables shows the mean daily elevation of water-surface at various gaging stations during 1912 as determined from various gages located on Oneida river, Oneida lake and tributaries.

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[a] A portion of the drainage area is shown on the Syracuse, Chittenango, Oneida, Oriskany, Morrisville, Cazenovia and Tully topographic atlas sheets of the United States Geological Survey.

The elevation of water-surface is in all cases referred to Barge canal datum, which is mean tide level at New York city, taken as being 14.73 ft. below a certain bench-mark known as grist mill bench-mark, at Greenbush (Rensselaer), N. Y.

The tables are arranged in order going upstream from Three River Point and show by comparison the fall in the stream between the different gages. Tables of elevation of water-surface at some additional points in the drainage basin where records of discharge are maintained will be found in connection with the descriptions of the several discharge stations.

Occasionally apparent inconsistencies in the tables of water-surface elevation occur where the water level at an upstream gage is recorded slightly lower than at a point farther downstream, but are, as a rule, not the result of actual mistakes, but arise from the fact that most of the gages are read to the nearest tenth foot only, and also owing to the fact that the streams and lakes are sometimes affected by wind to such an extent as to cause the water-surface to be slightly higher at the downstream end of the level reach than at the upstream end.

The accompanying table gives details as to the types of gages used, the datum of each and the manner in which they are read.

Water-surface Elevation Gages Maintained on the Oneida River and Tributaries During the Year 1912.

LOCATION.	Date established.	Observer.	Elevation of zero mark (B. C. datum).	Type of gage.	Subdivision of gage.	Readings taken to
Oneida river:						
Three River Point	April 16, 1904	John Chamberlain	361.00	Staff	$\frac{1}{10}$ foot	$\frac{1}{10}$ foot
Oak Orchard, below dam	April 23, 1904	Louis McArthur	361.12	"	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Oak Orchard, above dam	Aug. 30, 1902	Louis McArthur	360.84	"	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Caughdenoy, below lock	April 22, 1904	John R. Hiller	362.93	"	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Caughdenoy, above lock	April 22, 1904	John R. Hiller	369.05	"	$\frac{1}{10}$ "	$\frac{1}{100}$ "
Brewerton	April 22, 1904	George Heagle	367.06	"	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Oneida Lake — Sylvan Beach	July 1, 1904	Wm. H. Dunn	368.00	"	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Oneida creek:						
Kenwood, below dam	1907	A. H. Mason	*	"	$\frac{1}{10}$ "	$\frac{1}{100}$ "
Kenwood, above dam	1907	A. H. Mason	*	"	$\frac{1}{10}$ "	$\frac{1}{100}$ "
Butternut creek — Jamesville	July 25, 1907	Maria B. Brown	*	Chain	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Limestone feeder — Fayetteville	Aug. 27, 1905	Chas. Goodfellow	423.82	Staff	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Limestone creek:						
Fayetteville, above dam	Aug. 27, 1905	Chas. Goodfellow	429.53	"	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Manlius	July 23, 1907	Clyde Judge	*	Chain	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Chittenango creek — Chittenango	May 22, 1901	Floyd Bettinger	450.87	Staff	$\frac{1}{10}$ "	$\frac{1}{10}$ "

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* Arbitrary datum.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Oneida River at Three River Point, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	363.90	362.47	364.67	367.07	365 57	365.37	363.60	363.10	363.20	364.50	364.40	364.80
2.....	363.90	362.37	364.67	367.27	365.47	364.87	363.50	363.00	363.50	364.40	364.30	364.90
3.....	363.82	362.37	364.77	367.57	365.37	364.77	363 50	363.20	363.50	364.40	364.30	364.90
4.....	363.90	362.17	364.87	367.67	365.27	364.37	363.70	363.10	363.40	364.40	364.40	364.80
5.....	363.90	362.17	364.47	367.67	365.17	363.47	363.70	363.50	363.30	364.50	364.50	364.90
6.....	363.90	361.87	364.47	367.87	364.97	363.27	363.50	363.30	363.20	364.50	364.30	365.00
7.....	363.90	361.87	364.37	367.97	364.87	363.17	363.60	363.10	363.20	364.50	364.20	365.00
8.....	363.82	361.57	364.37	368.07	364.57	362.97	363.80	363.10	363.30	364.70	364.20	365.00
9.....	363.73	361.57	364.27	368.17	364.47	363.37	363.50	363.10	363.50	364.60	364.40	365.10
10.....	363.65	361.57	364.47	368.07	364.27	363.17	363.40	363.00	363.40	364.50	364.40	365.20
11.....	363 65	361.67	364.37	368.17	364.07	362.97	363.50	363.30	363.30	364.50	364.80	365.20
12.....	363.57	361.67	364.37	368.17	363.97	362.97	363.50	363.50	363.20	364.40	364.70	365.00
13.....	363.48	361.67	364.37	368.07	364.17	363.07	363.40	363.40	363.20	364.40	364.60	364.90
14.....	363.48	362 47	364.37	367.97	364.07	362.97	363 60	363.40	363.10	364.50	364.60	364.80
15.....	363.48	362.47	364.47	367.87	363.87	362.87	363.70	363.40	363.40	364.70	364.50	365.20
16.....	363.40	362.47	364.67	367.47	363.77	363.37	363.50	363.20	363.90	364.50	364.50	365.30
17.....	363.32	362.37	365.17	367.27	363.87	363.17	363.40	363.10	363.70	364.50	364.50	365.00
18.....	363.32	362.77	365.57	367.07	363.97	362.97	363.30	363.30	363.70	364.40	364.60	364.70
19.....	363.15	362.97	365.97	367.17	363.97	363.07	363.20	363.50	363.60	364.40	364.70	365.00
20.....	362.90	362.97	366.37	367.07	364.07	362.87	363.00	363.40	363.50	364.40	364.50	365.00
21.....	362.82	363.47	366.67	366.97	364.07	363.37	363.20	363.40	363.40	364.60	364.40	364.80
22.....	362.67	363.87	366.77	366.87	364.47	363.87	363.50	363.30	363.70	364.60	364.40	365.00
23.....	362.47	363 87	366.67	366.67	364.37	363.77	363.30	363.20	363.80	364.60	364.50	365.10
24.....	362.47	363.97	366.57	366.57	364.77	363.67	363.10	363.30	363.80	364.50	364.50	364.90
25.....	362.37	364.07	366.27	366.47	364.67	363.97	363.00	363.30	364.20	364.50	364.60	365.00
26.....	362.87	364.27	365.57	366.57	364.87	363.97	363.10	363.50	364.40	364.70	364.60	365.00
27.....	362.77	364.37	365.57	366.57	364.67	363.47	363.00	363.50	364.50	364.80	364.70	364.90
28.....	362.77	364.37	365.57	366.47	364.37	363.47	362.80	363.30	364.50	364.60	364.60	364.80
29.....	362.77	364.67	365.77	366.17	364.77	363.37	363.20	363.20	364.50	364.50	364.80	365.00
30.....	362.47	......	366.17	365.57	364.87	363.57	363.20	363.10	364.50	364.50	364.80	365.00
31.....	362.47	......	366.77	......	365.17	......	363.10	362.90	......	364.50	......	364.80

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Oneida River below Dam at Oak Orchard, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	366.42	363.72	365.12	367.57	368.02	365.82	363.47	363.12	363.07	364.47	364.27	364.82
2.....	366.32	363.72	366 12	368.17	367.52	365.82	363.42	363.22	363.12	364.62	364.22	364.82
3.....	366.32	363.62	365.12	368.87	367.32	365.77	363.32	363.22	363.12	364.57	364.07	364.82
4.....	366.52	363.72	365.12	368.97	366.82	365.42	363.32	363.22	363.12	364.52	364.02	364.87
5.....	366.52	363.92	365.12	368.92	366.62	365.07	363.32	363.22	363.02	364.52	363.97	365.07
6.....	366.62	363.92	365.12	369.07	366.47	364.77	363.32	363.22	363.07	364.52	363.92	365.17
7.....	365.92	363.92	366.12	369.62	366.27	364.57	363.32	363.27	363.12	364.52	363.92	365.32
8.....	365.92	363.72	365.32	369.92	366.12	364.32	363.32	363.32	363.17	364.47	364.02	365.32
9.....	365.72	363.72	365.12	369.97	365.92	364.22	363.32	363.37	363.07	364.42	364.02	365.32
10.....	365.72	363.52	364.92	369.87	365.87	364.17	363.32	363.42	363.12	364.37	364.22	365.32
11.....	365.72	363.12	364.92	369.87	365.62	364.07	363.37	363.37	363.12	364.17	364.47	365.22
12.....	365 52	362.92	364.72	369.67	365.42	363.92	363.42	363.32	363.07	364.07	364.67	364.92
13.....	365.52	362.92	364.92	369.77	365 22	363.82	363.42	363.22	363.02	364.02	364.72	364.62
14.....	365.52	362.82	365.12	369.67	365.12	363.82	363.42	363.12	363.02	364.02	364.72	364.47
15.....	365.32	363.12	365.32	369.67	365.17	363.82	363.42	363.12	363.12	364.02	364.72	364.67
16.....	365.22	362.92	365.12	369.47	365.37	363.67	363.42	363.17	363.52	364.02	364.72	364.82
17.....	364.92	362.92	365.32	369.32	365.42	363.62	363.37	363.22	363.52	363.97	364.72	364.82
18.....	364.52	362.82	365.22	369.37	365.27	363.62	363.02	363.22	363 47	363.92	364.72	364.87
19.....	363.92	363.12	365.32	369.27	365.17	363.67	363.02	363.22	363.42	363.92	364.67	364.92
20.....	363.92	362.92	365.32	369.07	365.42	363.82	363 02	363.22	363.32	363.97	364.62	364.82
21.....	363.72	362.92	365.22	368.87	365.72	363.82	363.32	363.17	363.32	364.02	364.62	364.82
22.....	363.72	363.32	365.67	368.87	365.92	363.73	363.32	363.12	363.47	364.02	364.52	364.77
23.....	363.62	363.92	365.87	368.87	365.87	363.62	363.32	363.12	363.57	364.02	364.62	364.82
24.....	363.72	364.32	366.27	368.87	365.82	363.57	363.32	363.12	363.92	364.07	364.67	364.82
25.....	363.92	364.32	366 92	368.87	365.77	363.52	363.32	363.07	364.12	364.27	364.72	364.82
26.....	363.92	364.32	367.22	368.87	365.72	363.52	363.27	363.02	364.12	364.42	364.82	364.77
27.....	363.92	364.42	367.17	368.67	365.72	363.57	363.12	363.02	364.12	364.42	364.77	364.72
28.....	363.72	364.42	367.17	368.57	366.02	363.62	363.12	362.97	364.22	361.42	364.72	364.62
29.....	363.92	365.12	367.07	368.62	366.07	363.52	363.12	362.92	364.27	364.42	364.72	364.67
30.....	363.92	......	366.62	368.47	366.02	363.62	363.12	362.87	364.32	364.37	364.82	364.62
31.....	363.92	......	366.82	......	365.87	......	363.17	362.92	......	364.32	......	364.62

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Oneida River above Dam at Oak Orchard, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	367.70	366.00	364.80	368.25	368.75	367.00	365.04	364.99	365.59	367.14	366.99	367.89
2.....	367.70	366.00	364.80	368.80	368.55	367.00	365.04	365.19	365.69	367.19	367.04	367.94
3.....	367.60	366.00	365.80	369.30	368.10	366.95	364.99	365.24	365.84	367.34	366.94	367.94
4.....	367.60	366.20	364.80	369.55	367.80	366.75	364.94	365.19	365.89	367.29	366.89	368.04
5.....	367.60	366.00	365.80	369.60	367.80	366.55	364.94	365.14	365.94	367.24	366.84	368.29
6.....	367.70	366.00	364.80	369.60	367.75	366.45	364.94	365.14	365.99	367.14	366.84	368.54
7.....	367.60	365.90	364.80	369.80	367.55	366.25	364.94	365.19	366.04	367.14	366.89	368.64
8.....	366.60	365.90	365.90	*a*	367.40	366.20	364.94	365.24	366.04	367.14	367.09	368.59
9.....	366.60	365.90	365.90	*a*	367.25	366.20	364.84	365.24	366.04	367.04	367.24	368.54
10.....	366.40	366.00	365.80	*a*	367.20	366.15	365.04	365.34	365.99	366.99	367.24	368.54
11.....	366.40	365.60	365.60	*a*	367.20	366.10	365.74	365.34	365.94	366.94	367.29	368.44
12.....	366.40	365.60	365.80	*a*	367.05	366.05	365.74	365.24	365.89	366.94	367.34	367.99
13.....	366.60	365.40	365.80	*a*	366.90	365.85	365.64	365.24	365.84	366.84	367.34	367.54
14.....	366.40	365.40	364.80	*a*	366.90	365.80	365.59	365.34	365.89	366.84	367.39	367.59
15.....	366.50	365.50	365.90	*a*	367.05	365.80	365.54	365.74	365.94	366.84	367.44	367.84
16.....	366.60	365.60	366.00	*a*	367.20	365.75	365.54	365.84	366.14	366.84	367.54	368.04
17.....	366.40	365.60	366.00	*a*	367.10	365.70	365.39	365.84	366.14	366.74	367.59	368.04
18.....	366.40	365.60	365.80	*a*	366.85	365.70	364.84	365.69	366.04	366.74	367.64	368.04
19.....	366.20	365.40	365.90	*a*	366.90	365.65	364.69	365.64	366.04	366.74	367.64	367.94
20.....	366.20	365.60	365.90	369.80	366.85	365.60	364.74	365.64	365.99	366.74	367.69	367.94
21.....	366.20	365.50	366.00	369.65	366.85	365.50	364.79	365.59	366.04	366.79	367.74	367.94
22.....	366.20	365.50	366.35	369.60	367.00	365.50	364.94	365.54	366.24	366.89	367.74	367.94
23.....	366.10	365.60	366.50	369.65	367.10	365.35	364.94	365.54	366.59	367.14	367.74	367.84
24.....	366.00	365.60	366.85	369.55	367.10	365.34	364.84	365.54	366.84	367.19	367.79	367.84
25.....	366.00	365.60	367.30	369.45	367.10	365.29	364.79	365.54	367.14	367.24	367.79	367.89
26.....	366.20	365.70	367.65	369.50	367.00	365.24	364.59	365.49	367.14	367.24	367.74	367.84
27.....	366.00	365.60	367.60	369.40	367.00	365.24	364.34	365.44	367.14	367.24	367.74	367.79
28.....	366.00	365.80	367.55	369.35	367.35	365.24	364.34	365.44	367.14	367.19	367.79	367.74
29.....	366.00	365.80	367.45	369.25	367.40	365.09	364.34	365.34	367.14	367.14	367.84	367.74
30.....	366.00	......	367.25	369.15	367.30	365.09	364.34	365.29	367.14	367.09	367.84	367.74
31.....	366.20	......	367.45	......	367.05	......	364.59	365.34	......	367.04	......	367.79

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Oneida River below Lock at Caughdenoy, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	369.03	366.33	366.13	369.13	369.93	367.83	365.03	364.43	365.43	367.93	366.73	367.83
2.....	368.83	366.13	366.08	370.63	369.73	367.63	365.03	364.53	365.53	367.73	367.13	367.9[illegible]
3.....	368.13	365.83	366.08	370.73	369.53	367.63	365.03	364.63	365.63	367.63	367.03	368.13
4.....	368.03	365.83	366.13	370.73	369.43	367.63	364.93	364.73	365.53	367.53	367.13	368.33
5.....	367.73	365.88	366.13	370.93	369.23	367.43	364.93	364.73	365.53	367.43	366.93	368.53
6.....	368.03	365.83	366.13	371.03	368.93	367.23	364.83	364.83	365.63	367.33	366.83	368.13
7.....	368.03	365.73	366.13	371.33	368.63	366.93	364.83	364.83	365.63	367.33	366.93	368.53
8.....	368.23	365.73	366.13	371.63	368.33	366.83	364.83	364.93	365.63	367.23	367.03	368.43
9.....	367.83	365.78	366.13	371.73	367.93	366.73	364.73	365.03	365.63	367.13	367.13	368.53
10.....	367.73	365.78	366.13	371.93	367.83	366.63	365.53	365.03	365.63	366.93	367.23	368.73
11.....	367.73	365.78	366.13	372.03	367.83	366.53	365.53	365.03	365.73	366.93	367.23	368.73
12.....	367.63	365.78	366.28	371.93	367.83	366.33	365.43	365.13	365.73	366.83	367.33	368.43
13.....	367.53	365.78	366.28	371.83	367.83	366.03	365.33	365.13	365.73	366.73	367.43	368.63
14.....	367.33	365.78	366.33	371.73	367.73	366.13	365.33	365.23	365.73	366.63	367.43	368.53
15.....	367.03	365.78	366.38	371.63	367.73	366.03	365.43	365.23	365.83	366.43	367.43	368.43
16.....	367.03	365.78	366.48	371.63	367.93	365.93	365.33	365.33	366.13	367.53	367.53	368.43
17.....	367.13	365.93	366.93	371.73	367.83	365.93	365.23	365.33	366.33	366.53	367.53	368.33
18.....	367.53	365.93	367.18	371.83	367.63	365.83	365.13	365.43	366.33	366.43	367.53	368.23
19.....	367.13	365.88	367.53	371.93	367.53	365.83	364.93	365.43	366.33	366.33	367.63	368.03
20.....	366.43	365.88	367.58	371.73	367.63	365.73	364.83	365.43	366.43	366.43	367.63	368.03
21.....	366.53	365.93	367.73	371.53	367.83	365.63	364.73	365.53	366.43	366.73	367.53	368.13
22.....	366.58	365.03	367.93	371.43	367.93	365.53	364.83	365.43	366.43	366.63	367.53	368.33
23.....	366.53	365.03	368.13	371.33	367.73	365.53	364.73	365.33	366.53	366.63	367.53	368.23
24.....	366.53	365.93	368.13	371.23	367.93	365.43	364.63	365.33	366.93	366.73	367.63	368.33
25.....	366.33	365.93	368.18	371.13	367.93	365.43	364.53	365.33	367.33	366.93	367.63	368.33
26.....	366.73	366.03	367.93	371.03	367.73	365.33	364.43	365.23	367.93	367.03	367.63	368.23
27.....	366.23	366.03	367.83	370.83	367.63	365.33	364.43	365.23	368.03	367.13	367.53	368.23
28.....	366.13	366.03	367.73	370.53	367.73	365.23	364.43	365.23	368.13	367.33	367.63	368.03
29.....	366.23	366.03	368.03	370.43	367.73	365.23	364.43	365.33	368.13	367.23	367.63	368.03
30.....	366.43	......	368.23	370.33	367.83	365.13	364.43	365.33	368.03	367.13	367.73	368.13
31.....	366.43	......	368.63	......	367.93	......	364.43	365.33	......	367.13	......	368.23

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Oneida River above Lock at Caughdenoy, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	371.20	370.45	370.31	371 55	372.05	371.39	370.34	369.88	369.95	370.50	370.50	370.87
2.....	371.17	370.47	370.33	371.67	371.95	371.24	370.33	369.90	370.00	370.60	370.60	370.90
3.....	371.15	370.43	370.33	371.85	371.90	371.20	370.30	369.95	370.00	370.63	370.50	370.95
4.....	371.15	370.43	370.34	371.93	371.85	371.24	370.30	369.95	369.95	370.63	370.55	371.05
5.....	371.05	370.45	370.35	371.93	371.75	371.22	370.33	370.00	370.00	370.60	370.53	371.15
6.....	371.05	370.45	370.37	371.95	371.65	371.20	370.31	370.03	370.00	370.65	370.50	370.85
7.....	371.05	370.41	370.37	372.05	371.60	371.05	370.30	370.05	370.00	370.65	370.47	371.15
8.....	371.00	370.37	370.31	372.20	371.55	370.95	370.29	370.00	370.05	370.63	370.50	371.15
9.....	370.90	370.39	370.33	372.47	371.45	371.00	370.25	370.03	370.10	370.60	370.55	371.05
10.....	370.85	370.39	370.33	372.50	371.35	370.89	370.19	370.00	370.10	370.55	370.57	371.15
11.....	370.85	370.37	370.34	372.45	371.30	370.85	370.09	370.00	370.10	370.50	370.60	371.15
12.....	370.85	370.39	370.35	372.43	371.47	370.83	370.11	369.95	370.05	370.50	370.65	370.85
13.....	370.83	370.39	370.37	372.41	371.39	370.81	370.90	370.00	370.10	370.50	370.80	371.05
14.....	370.80	370.39	370.41	372.17	371.29	370.85	370.13	369.85	370.10	370.43	370.75	371.05
15.....	370.75	370.39	370.41	371.95	371.27	370.83	370.19	369.85	370.15	370.43	370.65	370.95
16.....	370.80	370.39	370.42	371.93	371.30	370.79	370.15	369.90	370.20	370.45	370.70	370.95
17.....	370.83	370.30	370.43	371.95	371.34	370.75	370.07	369.95	370.25	370.47	370.75	371.05
18.....	370.91	370.25	370.47	372.00	371.34	370.73	370.07	370.00	370.25	370.45	370.75	370.95
19.....	370.79	370.20	370.65	372.44	371.33	370.71	369.99	370.00	370.27	370.45	370.77	370.85
20.....	370.75	370.25	370.73	372.79	371.39	370.67	370.05	369.95	370.23	370.47	370.77	370.85
21.....	370.70	370.30	370.81	372.74	371.45	370.65	370.00	369.95	370.23	370.50	370.75	370.95
22.....	370.73	370.30	371.00	372.64	371.54	370.63	369.99	370.00	370.30	370.47	370.75	372.00
23.....	370.60	370.25	371.10	372.24	371.45	370.60	369.97	369.95	370.33	370.43	370.77	371.05
24.....	370.63	370.25	371.10	372.59	371.24	370.54	369.93	369.95	370.55	370.47	370.75	371.05
25.....	370.61	370.29	371.13	372.55	371.39	370.49	369.91	369.95	370.50	370.55	370.75	370.95
26.....	370.60	370.33	371.10	372.53	371.29	370.49	369.90	369.93	370.55	370.57	370.73	370.90
27.....	370.57	370.33	371.05	372.15	371.25	370.49	369.90	369.90	370.60	370.63	370.70	370.90
28.....	370.55	370.35	371.05	372.24	371.20	370.47	369.90	369.95	370.57	370.65	370.75	370.80
29.....	370.60	370.35	371.17	372.39	371.25	370.47	369.90	369.90	370.60	370.65	370.85	370.80
30.....	370.55	......	371.29	372.09	371.30	370.44	369.90	369.90	370.62	370.63	370.85	370.85
31.....	370.50	......	371.33	......	371.24	......	369.90	369.90	......	370.60	......	370.95

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Oneida River at Brewerton, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1......	371.96	370.96	370.76	373.16	373.86	*a*	370.56	369.96	370.06	370.86	370.96	371.16
2......	371.96	370.86	370.76	373.36	373.86	*a*	370.56	369.96	370.06	370.86	370.96	371.26
3......	371.86	370.86	370.76	373.86	373.66	*a*	370.56	369.96	370.06	370.86	370.96	371.26
4......	371.86	370.86	370.76	373.96	373.56	372.16	370.56	369.96	370.06	370.86	370.96	371.36
5......	371.76	370.86	370.76	374.16	373.46	372.06	370.46	369.96	370.06	370.86	370.96	371.46
6......	371.76	370.76	370.76	374.16	373.26	371.96	370.46	369.96	370.06	370.86	370.96	371.46
7......	371.66	370.76	370.76	374.36	373.16	371.86	370.46	369.96	370.06	370.86	370.96	371.46
8......	371.56	370.76	370.76	374.76	373.06	371.86	370.46	369.96	370.06	370.86	370.96	371.46
9......	371.56	370.76	370.76	374.96	372.96	371.76	370.46	369.96	370.06	370.86	370.96	371.56
10......	371.56	370.76	370.76	375.06	372.86	371.76	370.36	369.96	370.06	370.96	370.96	371.76
11......	371.46	370.76	370.86	375.06	372.66	371.56	370.36	370.06	370.06	370.96	370.96	371.76
12......	371.46	370.76	370.96	375.06	372.06	371.56	370.26	370.06	370.06	370.86	370.96	371.66
13......	371.46	370.76	371.06	374.96	372.46	371.36	370.26	370.06	370.06	370.86	371.06	371.56
14......	371.46	370.76	371.16	374.86	372.46	371.36	370.16	370.06	370.06	370.76	371.06	371.56
15......	371.36	370.76	371.26	374.86	372.36	371.26	370.06	370.06	370.16	370.76	371.06	371.56
16......	371.36	370.76	371.26	374.86	372.36	371.16	370.06	370.06	370.26	370.76	371.06	371.56
17......	371.36	370.76	371.16	374.96	372.36	371.06	370.06	370.06	370.26	370.66	371.06	371.56
18......	371.36	370.76	371.06	374.96	372.36	370.96	370.06	370.06	370.26	370.66	371.06	371.46
19......	371.26	370.76	371.06	374.86	372.36	370.96	370.06	370.06	370.36	370.66	371.06	371.46
20......	371.26	370.76	371.06	374.86	372.26	370.96	370.06	370.06	370.36	370.66	371.06	371.46
21......	371.26	370.76	371.06	374.86	372.36	370.96	370.06	369.96	370.36	370.66	371.06	371.46
22......	371.26	370.76	371.16	374.76	372.36	370.86	370.06	369.96	370.36	370.66	371.06	371.46
23......	371.16	370.76	371.26	374.76	372.36	370.86	370.06	369.96	370.36	370.66	371.06	371.46
24......	371.16	370.76	371.36	374.76	372.36	370.86	370.06	369.96	370.46	370.66	371.06	371.46
25......	371.16	370.76	371.56	374.66	372.46	370.86	370.06	369.96	370.56	370.66	371.16	373.46
26......	371.16	370.76	371.66	374.46	372.56	370.86	370.06	370.06	370.76	370.66	371.16	371.46
27......	371.16	370.76	371.96	374.26	372.56	370.86	369.96	370.06	370.76	370.66	371.26	371.36
28......	371.06	370.76	372.06	374.16	372.56	370.76	369.96	370.06	370.76	370.66	371.26	371.26
29......	371.06	370.76	372.26	374.06	372.56	370.66	369.96	370.06	370.86	370.76	371.26	371.26
30......	371.06	......	372.06	373.86	372.56	370.66	369.96	370.06	370.86	370.86	371.26	371.26
31......	370.96	......	373.06	......	372.56	......	369.96	370.06	......	370.86	......	371.26

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Oneida Lake at Sylvan Beach, N Y

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1......	372.50	370.90	371.00	372.80	374.10	372.50	370.60	370.00	370.00	371.10	371.20	371.30
2......	372.50	370.80	371.00	373.80	374.10	372.50	370.60	370.00	370.00	371.00	371.20	371.40
3......	372.40	370.70	371.00	373.90	374.00	372.40	370.55	370.00	370.00	371.00	371.20	371.50
4......	372.40	370.60	371.00	374.00	374.00	372.40	370.50	370.00	370.00	371.00	371.10	371.70
5......	372.30	370.60	371.00	374.20	373.90	372.30	370.50	370.00	370.10	370.90	370.45	371.60
6......	372.30	370.60	371.00	374.40	373.80	372.20	370.40	370.00	370.10	370.90	370.80	371.90
7......	372.00	370.60	371.00	376.20	373.20	372.10	370.40	370.10	370.10	370.80	370.60	371.90
8......	372.00	370.50	369.90	376.40	373.40	372.00	370.40	370.10	370.30	370.80	370.55	372.00
9......	371.80	370.50	370.90	376.40	373.30	372.00	370.30	370.20	370.30	370.80	370.55	372.00
10......	371.70	370.50	370.90	376.40	373.00	372.00	370.30	370.20	370.40	370.80	370.45	371.90
11......	371.60	370.50	370.90	376.40	372.80	371.90	370.30	370.20	370.40	370.90	370.45	371.90
12......	371.50	370.40	370.90	376.30	372.60	371.90	370.30	370.10	370.50	371.00	370.40	371.90
13......	371.40	370.40	371.00	376.20	372.50	371.70	370.30	370.10	370.50	371.00	370.40	372.00
14......	371.40	370.40	371.00	376.30	372.40	371.50	370.30	370.10	370.50	371.00	370.50	372.00
15......	371.40	370.30	371.00	376.40	372.40	371.30	370.20	370.10	370.50	371.00	370.50	371.90
16......	371.40	370.30	371.00	376.50	372.30	371.20	370.30	370.20	370.50	370.90	370.50	371.80
17......	371.30	370.30	371.10	376.60	372.40	371.10	370.20	370.20	370.60	370.90	370.40	371.60
18......	371.30	370.30	371.30	376.80	372.40	371.10	370.20	370.20	370.60	370.90	370.40	371.50
19......	371.10	370.30	371.30	376.90	372.40	371.10	370.20	370.30	370.60	370.90	370.40	371.50
20......	371.10	370.60	371.30	376.10	372.40	371.00	370.20	370.30	370.60	370.70	370.30	371.50
21......	371.10	370.70	371.30	376.00	372.50	371.00	370.20	370.10	370.60	370.70	370.30	371.40
22......	371.10	370.80	371.30	376.00	372.50	371.00	370.20	370.10	370.60	370.70	370.30	371.50
23......	371.10	370.80	371.40	376.00	372.60	371.00	370.20	370.00	370.60	370.60	370.30	371.50
24......	371.00	370.90	371.50	375.90	372.70	370.90	370.10	370.00	370.70	370.60	370.30	371.40
25......	371.00	370.90	371.50	375.70	375.70	370.90	370.10	370.00	370.80	370.80	370.60	371.40
26......	371.00	370.90	371.50	375.60	372.70	370.80	370.10	370.00	371.00	370.90	370.60	371.40
27......	371.00	371.00	371.60	374.50	372.70	370.75	370.10	370.10	371.00	371.00	370.70	371.30
28......	371.00	371.00	371.60	374.40	372.60	370.70	370.10	370.10	371.00	371.00	370.80	371.30
29......	370.90	371.00	371.70	374.30	372.60	370.70	370.10	370.00	371.10	371.00	370.90	371.30
30......	370.90	......	372.40	374.20	372.50	370.60	370.10	370.00	371.10	371.00	371.20	371.30
31......	370.90	......	372.60	......	372.50	......	370.00	370.00	......	371.20	......	371.30

ONEIDA RIVER AT CAUGHDENOY, N. Y.

A masonry dam was completed across the Oneida river at Caughdenoy during the summer of 1909. This dam has a substantially level crest 415 feet in length. The crest is at elevation 369.4 and has an ogee cross-section with a slope, or batter, on the upstream portion of the crest of 1 foot rise in 2 feet horizontal width. The downstream portion of the crest is rounded with a radius of 3.24 feet.

The gage is located about 150 feet upstream from the dam, on the right hand side of the stream. The channel at this point is about 350 feet in width, average bottom elevation being 365.0. The discharge from the dam has been calculated from United States Geological Survey experiments on an ogee cross-section similar in form, and an allowance has been made for velocity of approach. During the summer season and also to some extent during the winter season water is diverted past the left-hand end of the dam through the Caughdenoy lock. An estimate of the amount of diversion has been made and included in the calculated discharge of the river.

Mean Daily Discharge, Second-feet, of Oneida River at Caughdenoy, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1......	3,728	1,566	1,240	4,958	6,738	4,356	1,303	453	570	1,703	1,703	2,655
2......	3,633	1,621	1,282	5,395	6,496	3,858	1,282	480	659	1,945	1,945	2,737
3......	3,570	1,512	1,282	6,082	6,276	3,728	1,219	570	659	2,021	1,703	2,922
4......	3,570	1,512	1,303	6,408	6,082	3,858	1,219	570	570	2,021	1,824	3,258
5......	3,258	1,566	1,324	6,408	5,696	3,793	1,282	659	659	1,945	1,776	3,570
6......	3,258	1,566	1,367	6,494	5,322	3,728	1,240	711	659	2,072	1,703	2,600
7......	3,258	1,457	1,367	6,738	5,138	3,259	1,219	746	659	2,072	1,621	3,570
8......	3,106	1,367	1,240	7,227	4,958	2,922	1,199	659	746	2,021	1,703	3,570
9......	2,737	1,409	1,282	8,039	4,584	3,106	1,119	711	832	1,945	1,824	3,258
10......	2,600	1,409	1,282	8,130	4,222	2,710	1,000	659	832	1,824	1,872	3,570
11......	2,600	1,367	1,303	7,979	4,054	2,600	815	659	832	1,703	1,945	3,570
12......	2,600	1,409	1,324	7,919	4,662	2,545	851	570	746	1,703	2,072	2,600
13......	2,545	1,409	1,367	7,858	4,356	2,490	815	659	832	1,703	2,463	3,258
14......	2,463	1,409	1,457	7,129	4,021	2,600	888	412	832	1,512	2,330	3,258
15......	2,330	1,409	1,457	6,496	3,956	2,545	1,000	412	926	1,512	2,072	2,922
16......	2,463	1,409	1,485	6,408	4,054	2,436	926	480	1,019	1,566	2,198	2,922
17......	2,545	1,219	1,512	6,496	4,188	2,330	780	570	1,119	1,621	2,330	3,258
18......	2,774	1,119	1,621	6,574	4,188	2,278	780	659	1,119	1,566	2,330	2,922
19......	2,436	1,019	2,072	7,949	4,154	2,224	641	659	1,159	1,566	2,384	2,600
20......	2,330	1,119	2,278	8,937	4,356	2,122	746	570	1,079	1,621	2,384	2,600
21......	2,198	1,219	2,490	8,811	4,584	2,072	659	570	1,079	1,703	2,330	2,922
22......	2,278	1,219	3,106	8,553	4,923	2,021	641	659	1,219	1,621	2,330	6,574
23......	1,945	1,119	3,411	7,365	4,584	1,945	695	570	1,282	1,512	2,384	3,258
24......	2,021	1,119	3,411	8,402	3,858	1,800	534	570	1,824	1,621	2,330	3,258
25......	1,970	1,199	3,506	8,281	4,356	1,676	498	570	1,703	1,824	2,330	2,922
26......	1,945	1,282	3,411	8,221	4,021	1,676	480	534	1,824	1,872	2,278	2,737
27......	1,872	1,282	3,258	7,064	3,891	1,676	480	480	1,945	2,021	2,198	2,737
28......	1,824	1,324	3,258	7,365	3,728	1,621	480	570	1,872	2,072	2,330	2,463
29......	1,945	1,324	3,633	7,802	3,891	1,621	480	480	1,945	2,072	2,600	2,463
30......	1,824	......	4,021	6,868	4,054	1,539	480	480	1,996	2,021	2,600	2,600
31......	1,703	......	4,154	......	3,858	......	480	480	......	1,945	......	2,922
Mean.	2,559	1,343	2,145	7,279	4,621	2,571	843	575	1,107	1,804	2,130	3,112

Monthly Discharge of Oneida River at Caughdenoy, N. Y.
[Drainage area, 1,377 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in drainage area.
1912.					
January	3,728	1,703	2,559	1.86	2.14
February	1,621	1,019	1,343	0.975	1.05
March	4,154	1,240	2,145	1.56	1.80
April	8,957	4,958	7,279	5.29	5.90
May	6,738	3,728	4,621	3.36	3.87
June	4,356	1,539	2,571	1.87	2.09
July	1,303	480	843	0.612	0.706
August	746	412	575	0.418	0.482
September	1,996	570	1,107	0.804	0.897
October	2,072	1,512	1,804	1.31	1.51
November	2,600	1,621	2,130	1.54	1.72
December	6,574	2,463	3,112	2.26	2.61

CHITTENANGO CREEK DRAINAGE BASIN.

DESCRIPTION.

Chittenango creek is the principal tributary of Oneida lake from the south. It comprises three main branches: Butternut creek, Limestone creek and Chittenango creek proper. The three branches join near North Manlius. Above the junction of Butternut creek, Chittenango creek flows through an irregular dumbbell-shaped area extending in a northwest and southeast direction. This area lies chiefly in the dissected, hilly region south of the line of the New York Central railroad. The length of the basin is about 22 miles. Its width in the upper portion is 9 miles; in the middle portion, 4 miles; in the lower portion, 7 miles. The drainage basin is deeply rolling, mostly cleared and has a heavy, impervious soil with extensive sodded-meadow areas. The soil is underlaid by shale rock, often outcropping, and affording numerous springs. The stream tributaries are somewhat sparse. Marsh and swamp areas are very limited, with the exception of the Nelson swamp, about two square miles in area.

There were formerly several water-powers in use in the deep narrow valley between Chittenango falls and Chittenango. The outflow from Cazenovia lake is regulated and there is also a reservoir at Erieville. These reservoirs are used to supply the summit level of the Erie canal. The capacities of these reservoirs are given as follows in New York State Barge Canal Report for 1901, page 663:

Erieville Reservoir.

Storage capacity	318,424 cubic feet
Tributary drainage area	5.4 square miles
Water-surface	340 acres

Cazenovia Lake.

Tributary drainage area................	8.7 square miles
Storage capacity	206,997 cubic feet
Water-surface	1.7 square miles

The head of the stream is near Erieville reservoir, which is formed by a dam crossing a small stream valley, formerly tributary to Chenango river through Eaton brook. Results of gagings of Chittenango creek at Bridgeport, where the stream debouches into Oneida lake, may be found in the report of the State Engineer and Surveyor for 1902, supplement, pages 57–61. Cazenovia lake is located 10 miles below Erieville reservoir, which is at the head of the stream at elevation 1,190. From its outlet to the foot of the plateau at Erie canal crossing the stream descends 770 feet, the distance, following the general trend of the valley, being 11 miles. At Chittenango falls there occurs a precipitous descent of about 100 feet.

CHITTENANGO CREEK AT CHITTENANGO, N. Y.

A current-meter gaging station was established at Main street highway bridge in Chittenango village, May 22, 1901, by R. E. Horton, for the U. S. Geological Survey, by which it was maintained until July 9, 1905, when it was transferred to the care of this Department. Current-meter measurements have been taken and rating table made, from which the accompanying tables have been computed.

The stream at this point is entrained between parallel walls, affording a channel 50 feet wide, over which the bridge passes at a single span. The bridge stands at an angle to the thread of the stream, and has a span between abutments of 57 feet. The gage board is secured in a vertical position to the right abutment on the upstream side, and reads decimally from 0 to 8 feet. The stage of the stream is observed twice daily by the gage-reader, Bessie M. Kellogg. The bench-mark is on the upstream corner of the coping of the right-hand bridge abutment.

Elevation, bench-mark	458.39
Elevation, gage zero	450.16

The gaging station is one-half mile above the State dam, diverting water for the supply of the summit level of Erie canal. The freshet of December 15, 1901, changed the cross-section of the stream at the gaging station. Separate rating curves have been prepared for the periods preceding and following that date.

Mean Elevation of Water-surface (Barge Canal Datum) of Chittenango Creek at Chittenango, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	451.92	451.62	451.97	453.87	452.02	451.92	451.67	451.32	451.52	451.72	451.62	452.02
2	451.77	451.72	451.82	453.87	451.92	451.82	451.62	451.42	451.72	451.72	451.62	452.52
3	451.92	451.67	452.02	452.57	451.97	452.27	451.72	451.82	451.57	451.62	451.52	452.37
4	451.82	451.57	452.02	452.12	451.82	451.92	451.62	451.72	451.62	451.52	451.57	452.32
5	451.72	451.57	451.92	453.07	451.92	451.82	451.62	451.42	451.52	451.52	451.57	452.22
6	451.62	451.62	451.77	453.72	451.92	451.72	451.72	451.37	451.42	451.42	451.57	452.72
7	451.67	451.52	451.77	453.92	451.87	451.77	451.62	451.32	451.52	451.52	451.67	452.37
8	451.72	451.62	452.12	453.62	451.72	451.72	451.62	451.32	451.57	451.47	452.02	452.12
9	451.97	451.52	452.02	453.22	451.82	451.62	451.82	451.47	451.47	451.42	451.82	452.02
10	452.02	451.72	451.82	453.22	451.72	451.57	451.72	451.42	451.42	451.52	451.82	451.92
11	451.87	451.62	451.87	453.47	451.67	451.67	451.52	451.32	451.37	451.67	451.87	451.92
12	451.72	451.82	451.72	453.22	451.72	451.57	451.42	451.47	451.47	451.72	451.77	451.87
13	451.62	452.02	451.77	452.97	451.87	451.62	451.52	451.52	451.37	451.52	451.87	451.92
14	451.72	451.87	451.72	452.92	451.77	451.52	451.52	451.52	451.42	451.47	452.47	451.82
15	451.67	451.77	452.42	453.02	451.62	451.52	451.42	451.42	451.52	451.52	452.17	451.72
16	451.62	451.72	452.82	452.77	451.82	451.62	451.52	451.37	451.62	451.67	452.12	451.77
17	451.57	451.62	453.37	452.57	451.97	451.52	451.32	451.37	451.52	451.42	452.02	451.72
18	451.67	451.57	453.62	452.42	451.82	451.47	451.42	451.47	451.52	451.47	452.02	451.82
19	451.72	451.67	453.52	452.32	451.92	451.52	451.32	451.47	451.57	451.52	452.12	452.32
20	451.72	452.17	453.42	452.22	451.82	451.42	451.52	451.47	451.52	451.42	452.12	452.12
21	451.92	452.12	452.97	452.12	452.12	451.52	451.52	451.42	451.42	451.47	452.07	451.92
22	451.92	452.12	452.57	452.07	452.32	451.62	451.37	451.42	451.32	451.62	452.02	451.87
23	451.92	452.02	452.32	452.37	452.02	451.32	451.42	451.62	451.57	451.62	451.92	451.82
24	451.82	452.07	452.22	452.17	451.92	451.52	451.42	451.52	451.92	452.22	452.12	451.82
25	451.72	451.92	452.22	452.07	451.82	451.42	451.47	451.42	452.47	452.47	452.02	451.72
26	451.67	451.87	452.12	451.92	451.72	451.47	451.32	451.37	451.92	451.82	452.02	451.82
27	451.72	452.37	452.12	451.87	451.72	451.72	451.32	451.57	451.72	451.92	452.02	451.72
28	451.82	452.22	452.62	451.97	451.72	451.72	451.42	451.42	451.62	451.72	451.92	451.72
29	452.02	452.02	453.87	452.12	451.92	451.72	451.27	451.52	451.67	451.72	451.92	451.72
30	451.82	......	453.82	452.22	452.72	451.72	451.32	451.42	451.77	451.52	451.87	451.92
31	451.72	......	453.27	......	452.27	......	451.42	451.32	......	451.72	......	452.12

Current-meter Discharge Measurement of Chittenango Creek at Chittenango, N. Y.

DATE.	Hydrographer.	GAGE READING. Beginning.	GAGE READING. Ending.	GAGE READING. Mean.	Meter No.	Lateral interval.	Submergence depth.	Total area.	Total width.	Computed discharge.	Velocity correction factor.	Corrected discharge.
						Feet.		*Sq. ft.*	*Feet.*	*Sec.-ft.*		*Sec.-ft.*
1912. May 11..	Barrett & Fogarty.	1.00	1.00	1.00	360	5	0.6	92	54	147	0.866	127

BUTTERNUT CREEK.

DESCRIPTION.

The head waters of Butternut creek lie at elevation 1,700 feet, near the south line of Onondaga county. This stream drains a narrow basin about 24 miles in length and having an average width of about 3 miles. The stream flows in a southerly direction. Jamesville reservoir is located 14 miles below the source at elevation about 640. North of Erie canal the stream flows out into the flat lands, at elevation about 400, which border Oneida lake for a width of several miles. Butternut creek is joined by Limestone creek near North Manlius at a point about 1½ miles above its junction with Chittenango creek. Erie canal crosses the stream 4½ miles below Jamesville. Above Erie canal crossing the slopes are steep and the tributaries are mostly short laterals. Jamesville reservoir has a capacity of 170,000,000 cubic feet. The water-surface area is 252 acres. At a distance of 2.35 miles below Jamesville is a dam which diverts part of the stream to the Orrville feeder. This feeder is 2.25 miles in length.

BUTTERNUT CREEK NEAR JAMESVILLE, N. Y.

A gaging station was established on Butternut creek at the first bridge above the head of the Orrville feeder, July 25, 1907, by Robert E. Horton, for this Department. The gage is located about 2 miles below Jamesville, and measurements at this point will show the supply to the canal available from Jamesville reservoir and the Orrville feeder. A box-and-chain gage is bolted to the hand-rail of the bridge on the upstream side. The gage scale reads from zero to 7.5 feet, and the length of the chain is 13.00 feet. The current-meter measurements are made from the downstream side of the bridge, using the face of the right-hand abutments as an initial point. The bridge is subdivided at two-foot intervals and the span is 40 feet. The gage is read at 7 A. M. and 6 P. M. by Marie Brandt Brown.

Mean Daily Gage Height, in Feet, of Butternut Creek near Jamesville, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	1.10	1.55	1.90	3.45	1.90	1.80	1.35	1.35	1.30	1.35	1.95	2.15
2.....	1.10	1.50	1.80	3.65	1.85	1.75	1.25	1.20	1.25	1.35	2.00	2.20
3.....	1.10	1.45	1.75	3.20	2.00	1.65	1.20	1.35	1.35	1.30	1.90	2.05
4.....	1.10	1.30	1.70	3.35	1.80	1.70	1.35	1.30	1.30	1.30	1.90	2.05
5.....	1.10	1.35	1.75	3.60	1.80	1.45	1.40	1.25	1.30	1.45	2.05	2.15
6.....	1.10	1.35	1.65	2.95	1.85	1.30	1.25	1.35	1.30	1.45	2.05	2.15
7.....	1.10	1.45	1.75	3.50	1.90	1.55	1.25	1.20	1.30	1.45	2.10	2.15
8.....	1.10	1.45	1.85	2.50	1.80	1.25	1.30	1.25	1.40	1.50	2.05	2.15
9.....	1.20	1.50	1.80	3.05	1.90	1.40	1.35	1.25	1.25	1.45	2.10	2.15
10.....	1.15	1.40	1.65	3.25	1.65	1.45	1.40	1.30	1.30	1.50	2.10	2.25
11.....	1.20	1.40	1.60	3.05	1.70	1.50	1.40	1.30	1.25	1.35	2.20	2.25
12.....	1.15	1.40	1.70	2.90	1.55	1.45	1.40	1.30	1.35	1.45	2.10	2.20
13.....	1.15	1.45	1.65	3.00	1.60	1.40	1.45	1.40	1.35	1.25	2.05	2.20
14.....	1.20	1.45	1.80	2.85	1.45	1.45	1.35	1.40	1.30	1.35	2.10	2.25
15.....	1.35	1.45	1.85	2.70	1.45	1.50	1.40	1.50	1.35	1.45	2.10	2.30
16.....	1.45	1.50	2.05	2.55	1.65	1.50	1.35	1.35	1.30	1.40	2.15	2.25
17.....	1.55	1.50	2.20	2.55	1.60	1.40	1.35	1.30	1.40	1.30	2.10	2.20
18.....	1.65	1.50	2.20	2.35	1.90	1.40	1.30	1.35	1.35	1.40	2.10	2.20
19.....	1.75	1.60	2.80	2.30	1.85	1.40	1.40	1.30	1.55	1.55	2.15	2.25
20.....	1.75	1.70	3.70	2.30	1.95	1.45	1.40	1.30	1.35	1.40	2.20	2.30
21.....	1.80	1.85	3.25	2.25	2.25	1.45	1.35	1.25	1.45	1.45	2.20	2.25
22.....	1.75	1.80	2.45	2.40	2.40	1.50	1.30	1.45	1.40	1.55	2.15	2.30
23.....	1.80	1.85	1.90	2.40	2.05	1.50	1.25	1.35	1.50	1.65	2.20	2.30
24.....	1.80	1.85	1.75	2.50	2.05	1.45	1.30	1.35	1.50	1.70	2.25	2.30
25.....	1.85	1.50	1.85	2.10	1.95	1.45	1.35	1.30	1.40	1.75	2.20	2.30
26.....	1.85	1.85	1.80	2.05	1.80	1.40	1.35	1.40	1.40	1.85	2.25	2.30
27.....	1.85	2.00	1.85	1.90	1.90	1.40	1.40	1.35	1.35	1.95	2.30	2.25
28.....	1.85	2.00	3.10	1.95	1.70	1.45	1.30	1.35	1.30	2.00	2.25	2.25
29.....	1.80	1.90	4.85	2.10	1.70	1.40	1.30	1.45	1.30	2.00	2.25	2.30
30.....	1.75	......	4.66	2.40	1.85	1.50	1.35	1.80	1.35	2.00	2.30	2.20
31.....	1.75	......	2.85	......	1.65	......	1.45	1.35	......	1.90	......	2.20

Current-meter Discharge Measurement of Butternut Creek near Jamesville, N. Y.

DATE.	Hydrographer.	GAGE READING.			Meter No.	Lateral interval.	Submergence depth.	Total area.	Total width.	Computed discharge.
		Beginning.	Ending.	Mean.						
						Feet.		*Sq. ft.*	*Feet.*	*Sec.-ft.*
1912. May 10	Barrett & Fogarty....	1.74	1.79	1.76	360	2	0.6	45	38	73

Mean Daily Discharge, Second-feet, of Butternut Creek near Jamesville, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	16	51	88	397	88	76	34	34	30	34	94	119
2.....	16	46	76	459	82	71	26	22	26	34	100	126
3.....	16	42	71	330	100	61	22	34	34	30	88	106
4.....	16	30	66	371	76	66	34	30	30	30	88	106
5.....	16	34	71	440	76	42	38	26	30	42	106	119
6.....	16	34	61	269	82	30	26	34	30	42	106	119
7.....	16	42	71	410	88	51	26	22	30	42	112	119
8.....	16	42	82	176	76	26	30	26	38	46	106	119
9.....	22	46	76	292	88	38	34	26	26	42	112	119
10.....	19	38	61	344	61	42	38	30	30	46	112	134
11.....	22	38	56	292	66	46	38	30	26	34	126	134
12.....	19	38	66	258	51	42	38	30	34	42	112	126
13.....	19	42	61	280	56	38	42	38	34	26	106	126
14.....	22	42	76	247	42	42	34	38	30	34	112	134
15.....	34	42	82	216	42	46	38	46	34	42	112	142
16.....	42	46	106	186	61	46	34	34	30	38	119	134
17.....	51	46	126	186	56	38	34	30	38	30	112	126
18.....	61	46	126	150	88	38	30	34	34	38	112	126
19.....	71	56	236	142	82	38	38	30	51	51	119	134
20.....	71	66	478	142	94	42	38	30	34	38	126	142
21.....	76	82	344	134	134	42	34	26	42	42	126	134
22.....	71	76	167	158	158	46	30	42	38	51	119	142
23.....	76	82	88	158	106	46	26	34	46	61	126	142
24.....	76	82	71	176	106	42	30	34	46	66	134	142
25.....	82	46	82	112	94	42	34	30	38	71	126	142
26.....	82	82	76	106	76	38	34	38	38	82	134	142
27.....	82	100	82	88	88	38	38	34	34	94	142	134
28.....	82	100	304	94	66	42	30	34	30	100	134	134
29.....	76	88	*a*	112	66	38	30	42	30	100	134	142
30.....	71	......	*a*	158	82	46	34	30	34	100	142	126
31.....	71	......	247	......	61	......	42	34	......	88	......	126
Mean.	46	55	124	229	80	45	33	32	34	52	117	130

a Beyond limits of rating table.

Monthly Discharge of Butternut Creek near Jamesville, N. Y.

[Drainage area, 53 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1912.					
January........................	82	16	46	0.868	1.00
February........................	100	30	55	1.04	1.12
March........................	*a*478	56	124	2.34	2.70
April........................	459	88	229	4.32	4.82
May........................	158	42	80	1.51	1.74
June........................	76	26	45	0.849	0.947
July........................	42	22	33	0.623	0.718
August........................	46	22	32	0.604	0.696
September........................	51	26	34	0.642	0.716
October........................	100	26	52	0.981	1.13
November........................	142	88	117	2.21	2.47
December........................	142	106	130	2.45	2.82

a Actual maximum beyond limits of rating table.

Mean Daily Gage Height, in Feet, of Limestone Creek at Manlius, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	2.8	2.4	2.5	4.6	2.8	2.5	2.4	2.5	2.8	2.7	2.5	2.9
2	2.8	2.4	2.5	4.3	2.6	2.5	2.4	2.5	2.6	2.7	2.5	2.9
3	2.8	2.4	2.5	3.8	2.6	2.5	2.4	2.7	2.6	2.7	2.5	2.8
4	2.8	2.3	2.6	3.8	2.6	2.8	2.4	2.7	2.5	2.6	2.5	3.0
5	3.1	2.3	2.6	4.1	2.6	2.6	2.5	2.7	2.5	2.5	2.5	3.5
6	3.1	2.2	2.6	4.2	2.8	2.5	2.4	2.5	2.5	2.5	2.5	3.5
7	2.8	2.2	2.8	4.2	2.8	2.5	2.4	2.5	2.5	2.5	2.5	3.0
8	2.8	2.1	3.0	4.2	2.6	2.5	2.4	2.5	2.5	2.5	2.6	3.0
9	2.5	2.1	2.9	3.9	2.5	2.5	2.4	2.5	2.5	2.5	2.7	2.8
10	2.4	2.1	2.8	3.6	2.5	2.5	2.4	2.5	2.5	2.6	2.7	2.8
11	2.4	2.1	2.8	3.6	2.5	2.7	2.4	2.6	2.6	2.5	2.7	2.5
12	2.1	2.1	2.8	3.5	2.6	2.5	2.4	2.7	2.6	2.5	2.6	2.5
13	2.5	2.0	2.9	3.5	2.6	2.5	2.4	2.6	2.6	2.5	3.0	2.5
14	2.5	2.0	3.2	3.2	2.5	2.5	2.4	2.6	2.6	2.5	3.0	2.5
15	2.5	2.0	3.9	3.0	2.5	2.5	2.4	2.6	2.6	2.5	3.1	2.5
16	2.5	2.0	5.4	2.8	2.6	2.5	2.4	2.6	2.7	2.5	3.1	2.5
17	2.4	2.0	4.4	2.8	2.7	2.6	2.5	2.6	2.6	2.5	3.1	2.5
18	2.4	2.0	4.2	2.5	2.7	2.6	2.5	2.8	2.6	2.4	3.2	2.5
19	2.1	2.5	4.6	2.5	2.7	2.5	2.4	2.8	2.6	2.4	3.2	2.5
20	2.5	3.2	4.2	2.8	2.7	2.5	2.4	2.6	2.6	2.5	3.2	2.5
21	2.5	3.2	3.9	3.2	2.5	2.5	2.5	2.5	2.6	2.5	2.9	2.5
22	2.5	3.1	3.2	3.2	2.5	2.5	2.7	2.5	2.6	2.5	2.9	2.7
23	2.5	3.0	3.0	3.2	2.5	2.5	2.6	2.5	2.6	2.5	2.8	2.5
24	2.3	3.0	3.0	3.4	2.5	2.4	2.5	2.5	2.6	2.5	2.8	2.5
25	2.2	3.1	3.0	3.4	2.5	2.4	2.5	2.5	2.7	2.6	3.2	2.5
26	2.1	3.1	2.6	3.2	2.5	2.4	2.5	2.5	2.9	2.6	3.2	2.5
27	2.2	3.0	2.6	3.0	2.5	2.4	2.5	2.6	2.9	2.5	3.2	2.5
28	2.3	3.0	3.5	3.0	2.6	2.4	2.5	2.5	2.9	2.5	3.2	2.6
29	2.3	2.8	5.2	2.8	2.6	2.4	2.7	2.5	2.6	2.5	3.0	2.6
30	2.4	.....	4.2	2.8	2.5	2.4	2.5	2.6	2.6	2.5	3.0	2.8
31	2.4	.....	3.6	.....	2.5	.....	2.6	2.6	.....	2.5	.....	2.8

Current-meter Discharge Measurement of Limestone Creek at Manlius, N. Y.

DATE.	Hydrographer.	Gage Reading.			Meter No.	Lateral interval.	Submergence. depth.	Total area.	Total width.	Computed discharge.
		Beginning.	Ending.	Mean.						
1912.						Feet.		Sq. ft.	Feet.	Sec.-ft.
May 10	Barrett & Fogarty....	2.70	2.70	2.70	360	2	0.6	31	29	72

Mean Daily Discharge, Second-feet, of Limestone Creek at Manlius, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	94	40	52	446	94	52	40	52	94	80	52	112
2	94	40	52	378	64	52	40	52	64	80	52	112
3	94	40	52	280	64	52	40	80	64	80	52	94
4	94	30	64	280	64	94	40	80	52	64	52	128
5	146	30	64	336	64	64	52	80	52	52	52	220
6	146	20	64	356	94	52	40	52	52	52	52	220
7	94	20	94	356	94	52	40	52	52	52	52	128
8	94	14	128	356	64	52	40	52	52	52	64	128
9	52	14	112	298	52	52	40	52	52	52	80	94
10	40	14	94	240	52	52	40	52	52	64	80	94
11	40	14	94	240	52	80	40	64	64	52	80	52
12	14	14	94	220	64	52	40	80	64	52	64	52
13	52	10	112	220	64	52	40	64	64	52	128	52
14	52	10	164	164	52	52	40	64	64	52	128	52
15	52	10	298	128	52	52	40	64	64	52	146	52
16	52	10	*a*	94	64	52	40	64	80	52	146	52
17	40	10	400	94	80	64	52	64	64	52	146	52
18	40	10	356	52	80	64	52	94	64	40	164	52
19	14	52	446	52	80	52	40	94	64	40	164	52
20	52	164	356	94	80	52	40	64	64	52	164	52
21	52	164	298	164	52	52	52	52	64	52	112	52
22	52	146	164	164	52	52	80	52	64	52	112	80
23	52	128	128	164	52	52	64	52	64	52	94	52
24	30	128	128	202	52	40	52	52	64	52	94	52
25	20	146	128	202	52	40	52	52	80	64	164	52
26	14	146	64	164	52	40	52	52	112	64	164	52
27	20	128	64	128	52	40	52	64	112	52	164	52
28	30	128	220	128	64	40	52	52	112	52	164	64
29	30	94	608	94	64	40	80	52	64	52	128	64
30	40	......	356	94	52	40	52	64	64	52	128	94
31	40	......	240	......	52	......	64	64	......	52	......	94
Mean.	56	58	183	206	64	53	48	62	68	55	108	83

a Gage height beyond limits of rating curve.

Monthly Discharge of Limestone Creek at Manlius, N. Y.
[Drainage area, 67 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1912.					
January	146	14	56	0.836	0.964
February	164	10	58	0.866	0.934
March	608*a*	52	183	2.73	3.15
April	446	52	206	3.07	3.42
May	94	52	64	0.955	1.10
June	94	40	53	0.791	0.882
July	80	40	48	0.716	0.826
August	94	52	62	0.925	1.07
September	112	52	68	1.01	1.13
October	80	40	55	0.821	0.946
November	164	52	108	1.61	1.80
December	220	52	83	1.24	1.43

a Actual maximum above limits of rating curve.

ONEIDA CREEK.

DESCRIPTION.

The head waters of Oneida creek are in northeastern Madison county. Above Peterboro the drainage is mostly through a swamp averaging one-half mile in width by 2½ miles in length. The stream flows easterly from this swamp to the foot of the falls above Munnsville. In the vicinity of the falls the stream descends from elevation 1,100 to elevation 700 in about three miles. From Munnsville to Oneida the creek flows through a somewhat dissected valley of one mile average width, bordered by steep slopes rising 500 feet or more within a distance of one mile on either side. North of Oneida Castle the drainage is rather flat. Oneida creek enters the eastern end of Oneida lake near South Bay, the elevation of the lake being at 370. Water-power is utilized at Oneida Community and at Munnsville. A feeder dam at Oneida Castle diverts most of the low-water flow to the Erie canal through a feeder 2.9 miles long entering the canal at Durhamville. The drainage basin as a whole is irregularly pear-shaped and the upper basin is broad. The slopes are steep and the tributaries are well distributed and moderately branching. This basin is shown on the Morrisville, Oneida, Chittenango and Cazenovia sheets of the U. S. Geological Survey topographic map.

ONEIDA CREEK AT KENWOOD, N. Y.

A gaging station was established at the Oneida Community Dam and Silk Mill, June 11, 1907, by Robert E. Horton. A four-foot enamelled steel gage graduated to hundredths of feet is attached to a tree on the left-hand bank of Oneida creek, 175 feet upstream from the dam. The dam is of timber, having a crest length of 79.25 feet. The crest is nearly level and the cross-section is uniform throughout the entire length. A board gage with painted 10th-foot marks was also placed in the tail-race immediately below the silk mill. The silk mill contains one 24-inch Hercules and one 24-inch Camden water-wheel. Records are kept by H. L. Mason, showing the crest and tail-race gage readings each morning and night, together with the gate opening and number of hours run per day for each water-wheel. The elevations are referred to an assumed bench-mark consisting of a chiselled cross on the upstream corner of the right-hand abutment of the dam.

Elevation of assumed bench-mark..................	100.00
Elevation of crest gage zero......................	94.01
Mean crest elevation, about.......................	95.60
Tail-race gage zero...............................	82.97

Current-meter measurements were made in the tail-race to determine the turbine discharge in 1907.

The results of gaging at this station, 1898 to 1900, inclusive, may be found in the report of State Engineer and Surveyor for 1902, supplement, pages 49–52. Additional data is given in the report for 1906, supplement, pages 138–139.

Mean Daily Discharge, Second-feet, of Oneida Creek at Kenwood, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	81	52	81	111	101	81	55	16	*38	40	77	*157
2	48	75	81	106	94	*86	55	12	60	64	65	309
3	46	90	*81	106	111	124	55	98	62	57	*81	326
4	42	*81	81	112	92	106	68	81	41	43	74	276
5	34	84	95	134	*81	94	81	*65	3	45	82	269
6	61	78	81	100	85	76	68	7	22	*60	64	317
7	*81	84	86	*81	94	70	*68	3	40	58	71	225
8	48	83	81	112	104	65	47	3	*75	38	130	*193
9	43	79	81	101	101	*68	33	3	53	45	101	141
10	35	81	*81	101	94	81	25	3	36	38	*109	78
11	36	*81	95	107	106	58	20	*3	36	44	86	48
12	35	82	86	94	*81	74	19	3	57	68	77	51
13	60	82	95	89	112	64	15	3	24	*75	78	64
14	*81	82	109	*81	112	45	*60	16	25	43	173	69
15	50	84	115	113	112	42	47	21	*50	33	173	*81
16	82	84	81	102	101	*44	23	33	50	33	109	60
17	70	84	*115	102	106	46	15	32	25	32	*134	82
18	95	*81	166	102	95	57	15	*81	33	37	160	92
19	95	87	106	94	*81	40	16	45	46	58	141	104
20	90	88	114	95	112	29	10	17	43	*81	121	144
21	*81	82	98	*81	101	48	*60	18	52	54	118	139
22	82	81	87	94	120	a	47	23	*31	36	102	*115
23	56	82	75	95	85	*5	35	17	65	43	105	141
24	54	81	*94	102	76	26	19	11	64	161	*86	135
25	58	*81	88	108	74	27	19	*75	183	142	141	243
26	50	81	94	108	*81	20	12	53	102	118	128	155
27	41	81	88	101	70	17	10	23	77	*86	140	176
28	*81	81	99	*95	63	16	*3	23	58	135	180	128
29	44	81	169	112	76	10	18	26	*95	94	165	*115
30	76	......	99	106	81	*44	16	29	64	82	148	134
31	63	......	*81	......	94	......	18	19	......	60	......	147
Mean.	61	81	96	101	93	52	34	28	54	65	114	152

a No record. * Sunday.

Monthly Discharge of Oneida Creek at Kenwood, N. Y.

[Drainage area, 63 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1912.					
January	90	34	61.3	0.973	1.12
February	90	52	80.9	1.28	1.38
March	169	81	96.2	1.53	1.76
April	134	81	101.4	1.61	1.80
May	120	76	93.1	1.48	1.71
June	124	5	52.1	0.827	0.923
July	81	3	34.0	0.54	0.623
August	98	3	28.0	0.44	0.51
September	183	3	53.6	0.851	0.95
October	161	36	64.6	1.03	1.19
November	180	64	114.0	1.81	2.02
December	326	48	152.1	2.41	2.78

SENECA RIVER AND DRAINAGE BASIN.

DESCRIPTION.

Seneca river receives the drainage from the central group of lakes lying southward from Lake Ontario, known as the finger lakes. The drainage basin is rolling, though not precipitous, excepting for the deep narrow valleys crossing it, in which the lakes are situated, and certain additional valleys not at the present time occupied by lakes. All of the lakes properly belonging to the finger lake system do not drain into the Seneca river. Oneida lake on the east is tributary to Oneida river, while on the west of the Seneca river there is a series of lakes, including Honeoye, Canadice, Hemlock and Conesus lakes, smaller than, but parallel with and otherwise similar to the main finger lakes, which are tributary to Genesee river. The upper lakes of the system in the Seneca river basin are Onondaga, Otisco, Skaneateles, Owasco, Cayuga, Seneca, Keuka and Canandaigua lakes.

The stream designated as Seneca river originates at the outlet of Seneca lake, flows easterly to the foot of Cayuga lake, which discharges into it, and then northerly through the extensive Montezuma marshes to a point near Savannah where it leaves the broad marsh area and turns easterly, passing to the north of Syracuse, and receiving Onondaga outlet, then turning northerly and joining Oneida river at Three River Point to form the Oswego river. The most important tributaries of Seneca river are the outlets of Onondaga, Otisco, Skaneateles and Owasco lakes, and Clyde river, which enters the Seneca river near Clyde, and which in turn is formed by the junction of Mud creek and Canandaigua outlet at Lyons.

WATER-SURFACE ELEVATION RECORDS ON SENECA RIVER AND TRIBUTARIES.

The following tables show the mean daily elevation of water-surface at different gages maintained on Seneca river and tributaries during the year 1912. The elevation of water-surface is referred to Barge canal datum, which is equivalent to mean tide at New York, taking the bench-mark at Greenbush (Rensselaer) as 14.73.

The accompanying table shows the details of the different gages and the manner in which the readings are taken.

Water-surface Elevation Gages Maintained on the Seneca River and Tributaries During the Year 1912.

LOCATION.	Date established.	Observer.	Elevation of zero mark (B. C. datum).	Type of gage.	Subdivision of gage.	Readings taken to
Seneca river:						
Liverpool, Mud lock, No. 5	April 16, 1904	Frank Shane	361.37	Staff	$\frac{1}{10}$ foot	$\frac{1}{10}$ foot
Baldwinsville, below dam	Nov. 12, 1898	Charles Brannock	361.75	Chain	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Baldwinsville, above dam	Nov. 12, 1898	Charles Brannock	372.27	Staff	$\frac{1}{10}$ "	$\frac{1}{100}$ "
Memphis, below Jack's Reef	April 20, 1904	Wm. H. Burns	374.02	"	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Jordan, Cross lake bridge	May 1, 1904	Mark Quimby	373.59	"	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Port Byron, Mosquito Point bridge	April 21, 1904	Wm. Prettie	372.85	"	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Savannah	May 4, 1904	Arthur C. Carr	376.00	Chain	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Cayuga, near Cayuga lake	Oct. 10, 1905	Barge canal employee	381.42	Staff	$\frac{1}{10}$ "	$\frac{1}{100}$ "
Seneca Falls, near, below lock No. 6	Nov. 16, 1909	Barge canal employee	391.41	"	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Seneca Falls, near, above lock No. 3 and above river wall	Aug. 16, 1909	Barge canal employee	427.09	"	$\frac{1}{10}$ "	$\frac{1}{100}$ "
Waterloo, below lock No. 2	Aug. 11, 1909	Barge canal employee	428.53	"	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Waterloo, above lock No. 1	Aug. 11, 1909	Barge canal employee	443.37	"	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Geneva, below guard-lock	April 16, 1904	John Quail	445.83	"	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Geneva, above guard-lock	May 14, 1904	John Quail	445.73	"	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Onondaga outlet — Liverpool, Long Branch	April 16, 1904	Mark Kennedy	360.88	"	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Onondaga lake — Syracuse	May 14, 1904	Chas. Bourke	369.15	Ref. point	$\frac{1}{2}$ "	$\frac{1}{2}$ "
Onondaga creek — Syracuse, Temple St. bridge	Jan. 1, 1908	L. W. Moulton	376.11	Chain	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Clyde river:						
Clyde	Oct. 20, 1905	Wm. Carroll	378.54	"	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Lyons	Sept. 27, 1905	Barge canal employee	385.00	Staff	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Ganargua creek:						
Newark	Nov. 29, 1905	Wm. J. Swartz	406.00	Chain	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Palmyra	Mar. 25, 1907	C. H. Harrison	419.03	Staff	$\frac{1}{10}$ "	$\frac{1}{100}$ "
Canandaigua outlet — Alloway bridge, near Lyons	Sept. 18, 1906	Carl Tasher	403.32	"	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Canandaigua lake — Canandaigua	Sept. 10, 1909	A. H. O'Reilly	*	"	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Flint creek — Phelps	Aug. 5, 1910	Edw. Fitzgerald	*	Chain	$\frac{1}{10}$ "	$\frac{1}{100}$ "
Cayuga lake — Ithaca	Aug. 6, 1905	Seymour Addis	381.75	Staff	$\frac{1}{10}$ "	$\frac{1}{10}$ "

* Arbitrary datum.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Seneca River at Mud Lock, near Long Branch, Liverpool P. O., N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	364.27	363.27	364.57	368.97	366.07	365.87	363.57	363.27	362.77	364.67	364.37	......
2	364.27	363.27	364.57	368.97	365.87	365.67	363.47	363.47	362.77	364.57	364.37	......
3	364.07	363.07	364.57	369.07	365.67	365.47	363.47	363.77	362.87	364.37	364.47	......
4	363.97	362.97	364.57	369.07	365.37	365.07	363.37	363.97	362.97	364.37	364.57	......
5	363.67	362.77	364.67	369.07	365.27	364.97	363.37	363.57	362.97	364.27	364.57	......
6	363.57	362.67	364.67	369.17	365.07	364.87	363.47	363.07	363.07	364.27	364.57	......
7	363.57	362.57	364.77	369.27	365.07	364.67	363.67	363.17	363.27	364.17	364.67	......
8	363.47	362.47	365.07	369.77	364.97	364.37	363.57	363.17	363.27	364.17	364.67	......
9	363.67	362.37	365.27	369.77	364.97	364.27	363.47	363.37	363.27	364.27	364.57	......
10	363.77	362.57	365.37	369.77	364.87	364.07	363.37	363.37	363.37	364.27	364.57	......
11	363.77	362.57	365.57	369.77	364.67	363.87	363.37	363.57	363.37	364.37	364.67	......
12	363.67	362.57	365.97	369.67	364.87	363.77	363.27	363.67	363.47	364.37	364.67	......
13	363.47	362.77	365.97	369.57	364.87	363.67	363.37	363.57	363.47	364.27	364.77	......
14	363.37	363.17	366.17	369.47	364.77	363.57	363.47	363.37	363.67	364.17	364.77	......
15	363.37	363.27	366.37	369.47	364.67	363.47	363.77	363.27	363.87	364.07	364.77	......
16	363.37	363.37	366.37	369.37	364.77	363.47	363.57	363.27	363.87	364.07	364.67	......
17	363.57	363.37	366.87	369.17	364.87	363.47	363.47	363.17	363.87	363.97	364.57	......
18	363.67	363.67	367.47	369.07	364.87	363.57	363.57	363.07	363.67	363.97	364.57	......
19	363.67	363.97	368.17	368.87	364.97	363.57	363.57	363.07	363.67	364.17	364.47	......
20	363.67	364.07	368.77	368.67	365.17	363.67	363.57	363.17	363.57	364.17	364.57	......
21	363.47	364.17	368.77	368.47	365.17	363.67	363.97	363.17	363.47	364.27	364.67	......
22	363.37	364.27	368.47	368.17	365.27	363.57	363.67	363.07	363.47	364.27	364.67	......
23	362.67	364.27	368.37	368.07	365.47	363.67	363.57	363.07	363.37	364.37	364.77	......
24	362.97	364.37	368.27	367.87	365.47	363.77	363.37	363.07	363.37	364.37	364.77	......
25	362.87	364.57	368.07	367.77	365.47	363.77	363.27	363.17	363.67	364.37	364.87	......
26	362.87	364.67	367.87	367.67	365.37	363.67	363.37	363.17	363.87	364.37	364.87	......
27	362.77	364.67	367.67	367.47	365.37	363.57	363.67	363.07	364.27	364.37	364.87	......
28	362.67	364.57	367.47	367.17	365.17	363.57	363.47	362.97	364.47	364.27	364.97	......
29	362.77	364.57	367.67	366.97	365.67	363.57	363.27	362.97	364.77	364.27	364.97	......
30	362.97	......	368.37	366.67	365.87	363.67	363.27	362.97	364.77	364.27	364.97	......
31	363.17	......	368.77	......	365.97	......	363.17	362.77	......	364.27	......	......

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Onondaga Outlet, near Long Branch, Liverpool P. O., N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	364.18	362.88	365.58	368.38	366.78	365.68	363.78	363.38	363.38	364.58	364.38	365.08
2	364.08	362.78	365.68	368.88	366.68	365.48	363.78	363.38	363.38	364.48	364.38	365.08
3	364.08	362.68	365.68	369.28	366.48	365.28	363.78	363.38	363.38	364.38	364.38	365.08
4	364.08	362.58	365.58	369.28	366.28	365.08	363.78	363.38	363.38	364.38	364.38	365.08
5	363.98	362.48	365.48	369.28	366.08	364.98	363.78	363.38	363.38	364.38	364.38	365.08
6	363.98	362.38	365.38	369.28	365.88	364.88	363.78	363.38	363.38	364.38	364.48	365.18
7	363.98	362.28	365.28	369.48	365.68	364.78	363.78	363.38	363.38	364.38	364.48	365.18
8	363.98	362.18	365.18	369.78	365.48	364.68	363.78	363.38	363.38	364.38	364.58	365.18
9	363.98	362.08	365.08	369.78	365.28	364.48	363.78	363.48	363.38	364.38	364.58	365.18
10	363.98	361.98	365.08	369.78	365.18	364.28	363.78	363.48	363.38	364.28	364.68	365.18
11	363.98	362.08	365.08	969.78	365.08	364.08	363.78	363.48	363.38	364.28	364.78	365.18
12	363.88	362.18	364.98	369.78	364.98	363.98	363.78	363.48	363.38	364.28	364.88	365.18
13	363.88	362.28	364.98	369.68	364.98	363.88	363.78	363.58	363.38	364.28	364.88	365.18
14	363.78	362.38	364.98	369.58	364.88	363.78	363.78	363.58	363.38	364.38	364.88	365.18
15	363.68	362.48	365.08	369.38	364.88	363.68	363.78	363.58	363.38	364.38	364.88	365.08
16	363.58	362.58	365.38	369.18	364.98	363.68	363.78	363.68	363.68	364.38	364.98	365.08
17	363.48	362.68	365.68	368.88	365.08	363.68	363.78	363.68	363.88	364.48	364.98	365.08
18	363.38	362.88	366.68	368.68	365.08	363.68	363.78	363.68	363.88	364.48	364.98	365.08
19	363.28	363.08	367.18	368.48	365.18	363.68	363.78	363.68	363.88	364.48	364.98	365.08
20	363.18	363.08	367.88	368.28	365.18	363.78	363.78	363.58	363.88	364.48	364.98	365.08
21	363.18	363.18	368.18	368.08	365.18	363.78	363.78	363.58	363.88	364.48	364.98	365.08
22	363.08	363.28	367.88	367.88	365.28	363.78	363.68	363.58	363.88	364.48	365.08	365.08
23	363.08	363.38	367.48	367.78	365.28	363.78	363.58	363.58	363.88	364.48	365.08	365.08
24	363.08	363.48	367.38	367.58	365.38	363.78	363.48	363.48	363.88	364.48	365.08	365.08
25	362.98	363.68	367.28	367.38	365.38	363.78	363.38	363.48	363.98	364.38	365.08	365.08
26	362.98	363.98	367.18	367.18	365.48	363.78	363.38	363.48	364.08	364.38	365.08	365.08
27	362.98	364.38	367.08	367.08	365.48	363.78	363.38	363.38	364.18	364.38	365.08	365.08
28	362.88	364.88	366.98	366.98	365.58	363.78	363.38	363.38	364.28	364.38	365.08	365.08
29	362.88	365.38	366.88	366.88	365.68	363.78	363.38	363.38	364.38	364.38	365.08	365.18
30	362.88	......	367.68	366.88	365.88	363.78	363.38	363.38	364.48	364.38	365.08	365.18
31	362.88	......	367.88	......	*a*	......	363.38	363.38	......	364.38	......	365.18

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Onondaga Lake at Syracuse, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	363.98	362.57	365.15	368.07	366.15	366.15	363.57	363.15	363.32	364.40	364.32	364.75
2.....	363.90	362.57	365.15	368.73	365.98	365.90	363.57	363.07	363.40	364.32	364.23	364.85
3.....	363.82	362.48	365.07	369.07	365.90	365.73	363.57	363.15	363.48	364.23	364.23	364.85
4.....	363.82	362.40	364.98	369.07	365.82	365.40	363.73	363.15	363.48	364.23	364.15	364.85
5.....	363.82	362.40	364.90	369.07	365.73	365.07	363.65	363.15	363.40	364.15	364.07	364.95
6.....	363.82	362.32	364.82	369.15	365.65	364.65	363.57	363.15	363.32	364.15	363.98	364.95
7.....	363.82	362.32	364.73	369.15	365.48	364.48	363.57	363.15	363.23	364.07	363.98	365.05
8.....	363.73	362.23	364.65	369.65	365.32	364.32	363.57	363.07	363.23	364.07	364.15	366.04
9.....	363.65	362.23	364.65	369.65	365.23	364.15	363.57	363.07	363.23	363.98	364.48	366.05
10.....	363.57	362.15	364.73	369.65	365.07	364.07	363.57	363.07	363.23	363.98	364.57	366.04
11.....	363.48	362.15	364.73	369.65	364.90	363.90	363.57	363.23	363.23	363.98	364.65	365.15
12.....	363.40	362.07	364.73	369.57	364.82	363.82	363.57	363.40	363.15	363.98	364.65	364.95
13.....	363.40	362.07	364.73	369.48	364.73	363.65	363.57	363.40	363.15	363.98	364.73	364.75
14.....	363.32	362.07	364.73	369.32	364.65	363.48	363.57	363.40	363.07	363.98	364.73	364.55
15.....	363.32	362.15	364.90	369.15	364.57	363.40	363.57	363.32	363.07	363.98	364.82	364.45
16.....	363.23	362.40	365.82	368.98	364.57	363.40	363.65	363.32	363.65	363.90	364.82	364.45
17.....	363.15	362.48	365.90	368.73	364.65	363.48	363.65	363.23	363.57	363.90	364.73	364.45
18.....	363.07	362.65	366.40	368.48	364.82	363.48	363.57	363.23	363.57	363.90	364.65	364.45
19.....	363.07	362.82	366.98	368.32	364.90	363.48	363.57	363.23	363.57	363.90	364.65	364.55
20.....	362.92	363.07	367.57	368.07	365.07	363.40	363.57	363.23	363.48	363.90	364.57	364.65
21.....	362.90	363.40	367.90	367.90	365.32	363.40	363.48	363.23	363.48	363.90	364.57	364.75
22.....	362.82	363.90	367.65	367.73	365.40	363.40	363.48	363.23	363.48	363.90	364.48	364.75
23.....	362.82	364.07	367.32	367.48	365.40	363.48	363.40	363.23	363.57	363.98	364.40	364.65
24.....	362.73	364.23	367.15	367.32	365.40	363.48	363.40	363.32	363.73	364.07	364.57	364.65
25.....	362.73	364.40	366.98	367.15	365.40	363.73	363.32	363.23	364.23	364.15	364.82	364.65
26.....	362.65	364.57	366.82	366.98	365.32	363.48	363.32	363.23	364.40	364.15	364.90	364.65
27.....	362.65	364.82	366.65	366.82	365.23	363.57	363.15	363.32	364.40	364.32	364.90	364.75
28.....	362.65	364.98	366.65	366.65	365.48	363.57	363.15	363.23	364.32	364.40	364.90	364.75
29.....	362.65	365.07	366.98	366.57	365.65	363.57	363.32	363.23	364.32	364.40	364.90	364.65
30.....	362.65	......	367.40	366.48	365.98	363.57	363.32	363.23	364.40	364.40	364.82	364.65
31.....	362.65	......	367.57	......	366.15	......	363.15	363.23	......	364.40	......	364.65

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Onondaga Creek at Temple Street, Syracuse, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	379.51	378.76	380.41	383.76	380.33	379.50	378.70	377.79	*a*	378.71	378.61	*a*
2.....	379.41	378.66	380.41	383.73	380.07	*a*	378.51	377.66	380.26	378.61	378.51	380.49
3.....	379.31	378.66	*a*	382.71	379.99	379.98	378.69	378.46	379.11	378.33	*a*	381.93
4.....	378.71	*a*	379.66	381.36	379.81	379.66	379.11	*a*	379.21	378.21	378.41	381.11
5.....	*a*	378.64	379.01	381.51	*a*	379.46	378.59	377.91	378.96	*a*	378.22	380.31
6.....	378.93	378.63	378.71	382.61	379.41	379.33	378.41	377.93	378.21	*a*	378.21	380.76
7.....	378.89	378.66	378.96	*a*	379.94	379.32	*a*	377.81	378.41	377.99	378.19	381.53
8.....	378.83	378.71	379.01	384.01	379.84	379.28	378.51	377.76	*a*	377.91	380.34	*a*
9.....	378.89	378.51	379.69	382.21	379.81	*a*	378.52	377.71	377.86	377.91	380.61	380.15
10.....	378.83	378.51	*a*	381.91	379.84	379.26	378.56	377.81	377.76	377.89	*a*	379.84
11.....	378.73	*a*	379.11	381.86	379.80	379.21	378.41	*a*	377.76	378.11	380.31	379.74
12.....	378.66	378.61	379.33	381.71	*a*	379.01	378.46	378.11	377.94	378.31	379.96	379.71
13.....	378.61	378.59	379.00	381.49	379.86	378.81	379.43	377.99	378.16	*a*	379.64	378.46
14.....	*a*	378.59	378.51	*a*	379.91	378.62	*a*	377.94	377.91	378.25	380.56	379.11
15.....	378.63	378.76	379.93	381.11	379.62	379.01	379.43	377.81	*a*	378.06	381.16	*a*
16.....	378.63	378.53	385.97	381.06	379.76	*a*	379.43	377.76	377.66	377.96	380.50	379.16
17.....	378.81	378.61	*a*	380.81	380.89	379.05	380.16	377.61	378.19	377.91	*a*	379.29
18.....	379.16	*a*	384.21	380.66	380.53	379.01	379.02	*a*	377.96	377.96	380.41	379.24
19.....	379.96	378.69	383.26	380.91	*a*	379.05	379.30	378.01	377.91	378.06	380.36	380.01
20.....	380.93	379.91	383.21	380.91	379.91	379.01	377.29	*a*	377.99	*a*	380.20	380.56
21.....	*a*	381.16	381.01	*a*	379.76	378.81	*a*	379.01	377.91	378.03	380.16	379.84
22.....	380.31	380.51	380.29	380.51	381.01	378.89	378.26	377.91	*a*	378.00	379.96	*a*
23.....	380.23	380.61	380.01	381.61	380.21	*a*	377.76	378.11	378.26	378.01	379.89	379.11
24.....	379.06	380.51	*a*	381.23	379.73	379.26	377.71	378.14	379.65	379.74	*a*	379.36
25.....	378.86	*a*	379.81	380.91	379.71	378.59	377.61	*a*	381.66	380.61	380.70	379.21
26.....	378.74	380.41	379.64	380.51	*a*	379.08	377.56	377.71	379.59	379.72	380.79	379.16
27.....	378.81	381.01	379.76	380.41	379.46	379.12	377.71	377.96	378.87	*a*	380.79	379.14
28.....	*a*	382.14	380.58	*a*	379.46	379.17	*a*	378.06	378.59	379.06	380.70	379.11
29.....	378.76	380.14	382.61	380.16	379.35	378.86	377.86	377.81	*a*	378.86	380.59	*a*
30.....	378.81	......	384.87	380.81	379.76	*a*	378.31	377.74	379.21	378.74	380.50	379.16
31.....	378.81	......	......	......	379.73	......	377.75	377.71	......	378.66	......	381.06

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Seneca River below Dam at Baldwinsville, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	364.55	363.65	365.85	369.05	367.15	366.85	364.53	364.00	363.85	364.85	364.75	365.35
2	364.55	363.65	365.85	369.60	366.95	366.70	364.45	363.95	364.05	364.75	364.65	365.40
3	364.55	363.55	365.75	370.00	366.90	366.20	364.30	363.90	363.90	364.75	364.55	365.45
4	364.55	363.55	365.65	370.00	366.70	365.90	364.25	364.00	363.85	364.75	364.65	365.50
5	364.50	363.70	365.55	369.95	366.65	365.65	364.40	364.15	363.90	364.75	364.65	365.55
6	364.55	363.63	365.45	370.15	366.50	365.35	364.35	364.05	364.05	364.75	364.55	365.60
7	364.15	363.65	365.35	370.30	366.30	365.20	364.35	364.00	364.03	364.70	364.45	365.70
8	364.40	363.65	365.25	370.45	366.10	365.15	364.35	364.00	363.90	364.50	364.80	365.85
9	364.45	363.55	365.25	370.55	365.85	365.15	564.35	364.00	363.95	364.45	365.05	365.85
10	364.45	363.55	365.35	370.50	365.75	365.15	364.25	364.00	363.90	364.40	365.20	365.75
11	364.30	363.45	365.45	370.45	365.60	364.95	364.20	364.10	363.90	364.40	365.25	365.65
12	364.40	363.55	365.45	370.45	365.45	364.85	364.15	364.25	363.75	364.45	365.25	365.60
13	364.40	363.55	365.45	370.45	365.55	364.75	364.15	364.20	363.75	364.45	365.25	365.45
14	364.15	363.60	365.35	370.35	365.40	364.70	364.10	364.15	363.70	364.45	365.25	365.20
15	364.05	363.60	365.50	370.25	365.35	364.75	364.15	364.03	363.80	364.40	365.25	365.05
16	363.95	363.60	365.85	369.85	365.35	364.75	364.15	364.03	364.15	364.40	365.25	365.10
17	363.90	363.60	366.55	369.45	365.55	364.75	364.15	363.87	364.35	364.35	365.30	365.15
18	363.85	363.43	367.25	369.25	365.75	364.70	346.10	363.93	364.20	364.35	365.35	365.15
19	363.85	363.65	368.15	369.15	365.75	364.60	364.05	364.15	364.20	364.35	365.25	365.30
20	363.75	363.90	368.80	368.80	365.90	364.65	363.90	364.15	364.05	364.30	365.25	365.35
21	363.65	364.10	368.85	368.50	365.95	364.65	364.05	364.10	364.05	364.35	365.25	365.35
22	363.70	364.65	368.55	368.55	366.10	364.70	364.15	364.10	364.03	364.35	365.25	365.35
23	363.75	364.75	368.40	368.35	366.30	364.75	364.10	364.13	364.05	364.35	365.20	365.30
24	363.75	364.95	368.25	368.15	366.35	364.75	364.00	364.10	364.15	364.40	365.05	365.15
25	363.75	365.00	368.10	368.15	366.30	364.75	363.95	364.00	364.70	364.65	365.35	365.10
26	363.75	365.30	367.85	367.95	366.15	364.70	363.95	364.00	365.05	364.75	365.35	365.20
27	363.75	365.45	367.50	367.85	366.05	364.55	363.90	364.15	365.20	364.95	365.45	365.05
28	363.55	365.70	367.25	367.60	365.95	364.55	363.90	363.95	365.10	364.95	365.45	365.05
29	363.70	365.80	367.40	367.25	366.35	364.50	364.00	363.95	365.05	365.03	365.45	364.95
30	363.75	......	368.10	*a*	366.60	364.50	364.00	363.83	365.00	364.90	365.45	365.05
31	363.75	......	368.40	......	366.80	......	364.00	363.70	......	364.80	......	365.10

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Seneca River above Dam at Baldwinsville, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	374.87	374.07	375.27	376.47	375.52	375.97	374.57	374.12	372.22	375.17	375.07	375.67
2	374.82	373.99	375.19	376.77	375.47	375.87	374.45	374.12	372.42	375.07	375.07	375.57
3	374.72	374.05	375.27	376.77	375.42	375.79	374.42	374.15	*a*	375.05	375.02	375.67
4	374.72	374.19	375.17	376.87	375.37	375.67	374.52	374.29	*a*	375.02	375.02	375.67
5	374.57	374.17	375.07	376.97	375.27	375.62	374.49	374.27	*a*	374.97	375.07	375.67
6	374.47	374.05	375.02	376.97	375.22	375.52	374.62	374.25	*a*	374.97	375.02	375.77
7	374.55	373.97	374.97	377.02	375.15	375.45	374.69	374.22	373.59	374.85	375.07	375.87
8	374.49	374.02	374.97	377.07	375.29	375.37	374.62	374.22	373.75	374.72	375.27	376.02
9	374.45	374.07	374.97	377.07	375.67	375.39	374.52	374.09	373.89	374.62	375.45	375.97
10	374.42	374.12	375.09	377.07	375.69	375.32	374.52	374.12	373.85	374.57	375.57	375.82
11	374.45	374.27	375.07	377.07	375.62	375.25	374.45	374.25	373.92	374.57	375.57	375.77
12	374.32	374.27	375.07	377.07	375.69	375.17	374.37	374.22	373.97	374.65	375.57	375.77
13	374.32	374.22	375.07	377.02	375.72	375.05	374.37	374.19	373.99	374.67	375.55	375.79
14	374.39	374.22	375.05	376.87	375.62	375.05	374.45	374.12	374.15	374.62	375.57	375.75
15	374.32	374.12	375.07	376.87	375.55	375.05	374.37	374.02	374.32	374.62	375.57	375.75
16	374.22	374.22	375.22	376.77	375.47	375.09	374.39	373.89	374.49	374.52	375.59	375.57
17	374.12	374.29	375.37	376.72	375.57	375.02	374.35	373.85	374.47	374.55	375.77	375.32
18	374.12	374.37	375.77	376.52	375.67	374.99	374.29	373.92	374.47	374.52	375.55	375.35
19	374.12	374.37	376.22	376.45	375.87	374.92	374.29	373.85	374.42	374.57	375.57	375.69
20	374.09	374.45	376.35	376.32	375.82	374.92	374.25	373.72	374.27	374.59	375.67	375.57
21	374.29	374.37	376.07	376.27	375.82	374.92	374.29	373.67	374.22	374.52	375.55	375.57
22	374.15	374.55	375.97	376.22	375.87	374.87	374.22	373.42	374.29	374.47	375.47	375.47
23	374.09	374.65	375.97	376.17	375.95	374.82	374.22	373.07	374.37	374.49	375.42	375.35
24	374.07	374.79	376.07	376.12	375.97	374.77	374.17	372.92	374.47	374.67	375.42	375.27
25	373.99	374.99	376.05	375.95	375.92	374.72	374.15	372.97	374.75	374.67	375.62	375.42
26	373.92	374.92	375.89	375.87	375.87	374.72	374.19	373.07	375.12	374.82	375.67	375.17
27	373.97	374.99	375.72	375.87	375.77	374.65	374.15	372.82	375.27	374.97	375.72	375.07
28	374.12	375.15	375.62	375.85	375.67	374.57	374.22	372.69	375.25	374.97	375.77	375.07
29	374.07	375.25	375.79	375.72	375.85	374.57	374.19	372.47	375.17	375.07	375.69	375.02
30	374.07	......	375.99	375.62	375.97	374.65	374.22	372.32	375.12	375.07	375.67	375.09
31	374.05	......	376.22	......	375.99	......	374.12	372.22	......	375.12	......	375.17

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Seneca River at Foot of Jack's Reef, Memphis, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	375.12	374.22	375.72	378.22	376.62	376.72	374.82	374.32	375.62	375.32	375.22	375.92
2.....	375.12	374.22	375.72	378.62	376.62	376.62	374.82	374.32	375.22	375.32	375.22	375.92
3.....	375.12	374.12	375.62	378.82	376.42	376.52	374.92	374.43	374.92	375.22	375.12	376.02
4.....	375.12	374.12	375.42	379.02	376.32	376.32	374.92	374.52	374.62	375.22	375.22	376.12
5.....	375.02	374.12	375.42	379.12	376.22	376.12	374.92	374.52	374.42	375.22	375.22	376.02
6.....	374.92	374.12	375.32	379.22	376.12	375.92	374.92	374.42	374.22	375.12	375.22	376.12
7.....	374.82	374.12	375.32	379.12	376.02	375.82	374.92	374.42	374.22	375.02	375.32	376.12
8.....	374.82	374.02	375.32	379.42	376.02	375.72	374.82	374.32	374.12	374.92	375.52	376.22
9.....	374.82	374.02	375.32	379.42	376.22	375.72	374.82	374.32	374.02	374.92	375.72	376.32
10.....	374.72	374.02	375.32	379.32	376.22	375.72	374.72	374.32	374.02	374.82	375.92	376.12
11.....	374.72	374.02	375.32	379.32	376.12	375.62	374.72	374.42	374.02	374.82	375.92	376.12
12.....	374.72	374.02	375.42	379.32	376.12	375.62	374.72	374.42	374.12	374.82	375.92	375.82
13.....	374.72	374.02	375.52	379.22	376.22	375.52	374.62	374.32	374.12	374.92	375.92	375.62
14.....	374.72	374.02	375.42	379.22	376.12	375.42	374.62	374.22	374.22	374.82	375.92	375.42
15.....	374.72	374.12	375.52	378.92	376.02	375.42	374.62	374.22	374.32	374.82	375.92	375.52
16.....	374.62	374.12	375.82	378.82	376.02	375.42	374.62	374.12	374.62	374.72	376.02	375.52
17.....	374.62	374.12	376.32	378.62	376.12	375.32	374.52	374.02	374.82	374.72	376.02	375.52
18.....	374.62	374.02	376.82	378.42	376.12	375.32	374.52	374.02	374.72	374.82	375.92	375.62
19.....	374.52	374.12	377.62	378.22	376.42	375.32	374.52	374.02	374.72	374.82	375.92	375.92
20.....	374.42	374.12	378.02	378.02	376.42	375.22	374.42	374.12	374.52	374.72	375.92	375.82
21.....	374.42	374.12	377.92	377.82	376.32	375.12	374.62	374.12	374.52	374.72	376.02	375.82
22.....	374.42	374.12	377.52	377.82	376.42	375.12	374.62	374.22	374.52	374.62	375.92	375.72
23.....	374.32	374.22	377.42	377.62	376.52	375.12	374.52	374.32	374.62	374.72	375.82	375.72
24.....	374.32	374.62	377.12	377.52	376.52	375.12	374.52	374.52	374.72	374.72	375.92	375.62
25.....	374.32	374.92	377.12	377.22	376.52	375.02	374.42	374.62	374.92	374.82	375.92	375.52
26.....	374.32	375.12	377.02	377.22	376.42	375.02	374.42	374.62	375.32	374.92	376.02	375.52
27.....	374.22	375.32	376.92	377.12	376.32	375.02	374.32	374.82	375.62	375.12	376.12	375.32
28.....	374.22	375.42	376.92	377.02	376.12	374.92	374.42	375.02	375.62	375.22	376.12	375.32
29.....	374.22	375.62	376.92	376.82	376.42	374.92	374.42	375.12	375.42	375.22	376.22	375.22
30.....	374.22	......	377.32	376.72	376.52	374.92	374.32	375.32	375.32	375.22	376.12	375.22
31.....	374.22	......	377.62	.....	376.72	......	374.32	375.52	......	375.22	......	375.32

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Seneca River at Cross Lake, Jordan, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	375.09	374.39	375.89	378.84	377.04	376.99	374.89	374.39	372.64	375.39	375.29	376.09
2.....	375.09	374.39	375.99	379.34	376.89	376.84	374.79	374.39	372.94	375.39	375.29	376.04
3.....	375.19	374.39	375.89	379.64	376.79	376.64	374.79	374.39	373.14	375.29	375.29	376.19
4.....	375.09	374.49	375.79	379.79	376.64	376.44	374.79	374.39	373.44	375.29	375.29	376.19
5.....	374.94	374.49	375.69	379.89	376.54	376.29	374.69	374.49	373.64	375.19	375.29	376.19
6.....	374.79	374.39	375.69	379.79	376.39	376.19	374.69	374.39	373.84	375.19	375.29	376.29
7.....	374.69	374.39	375.59	379.69	376.29	376.09	374.69	374.39	373.89	375.04	375.39	376.29
8.....	374.79	374.29	375.59	379.79	376.39	375.99	374.69	374.39	374.94	374.89	375.54	376.39
9.....	374.79	374.29	375.59	379.89	376.39	375.89	374.69	374.39	374.09	374.89	375.74	376.39
10.....	374.79	374.29	375.59	379.89	376.39	375.79	374.69	374.39	374.19	374.89	375.94	376.29
11.....	374.79	374.29	375.69	379.89	376.39	375.69	374.69	374.49	374.29	374.89	375.99	376.19
12.....	374.59	374.39	375.69	379.89	376.39	375.59	374.69	374.44	374.39	374.89	375.94	376.04
13.....	374.59	374.39	375.69	379.79	376.39	375.49	374.59	374.39	374.44	374.89	375.89	375.64
14.....	374.59	374.39	375.69	379.64	376.29	375.39	374.59	374.39	374.49	374.89	375.99	375.54
15.....	374.59	374.29	375.74	379.44	376.19	375.39	374.59	374.29	374.59	374.79	375.99	375.59
16.....	374.49	374.29	375.99	379.24	376.29	375.39	374.59	374.24	374.69	374.79	376.09	375.69
17.....	374.49	374.39	376.49	379.04	376.39	375.39	374.59	374.09	374.79	374.79	376.09	375.69
18.....	374.39	374.39	377.19	378.84	376.49	375.34	374.59	374.19	374.69	374.79	375.99	375.84
19.....	374.39	374.49	378.04	378.64	376.59	375.19	374.49	374.09	374.59	374.79	375.89	375.99
20.....	374.39	374.49	378.64	378.44	376.69	375.19	374.49	374.09	374.49	374.79	375.99	376.09
21.....	374.49	374.64	378.84	378.24	376.79	375.19	374.39	373.94	374.49	374.79	375.99	375.99
22.....	374.59	374.84	378.14	378.09	376.79	375.19	374.39	373.79	374.59	374.69	375.99	375.89
23.....	374.49	375.04	378.09	377.99	376.89	375.19	374.39	373.64	374.84	374.74	375.99	375.79
24.....	374.49	375.19	378.04	377.89	376.89	375.19	374.39	373.49	375.04	374.89	375.99	375.69
25.....	374.39	375.29	377.89	377.79	376.79	375.09	374.39	373.49	375.29	374.99	375.99	375.69
26.....	374.39	375.44	377.69	378.64	376.64	375.09	374.39	373.44	375.39	375.09	376.14	375.64
27.....	374.39	375.64	377.34	377.49	376.49	374.99	374.39	373.24	375.49	375.19	376.19	375.39
28.....	374.39	375.79	377.09	377.39	376.39	374.99	374.39	373.04	375.59	375.24	376.29	375.39
29.....	374.49	375.89	377.29	377.29	376.54	374.89	374.39	372.89	375.49	375.29	376.19	375.29
30.....	374.49	......	377.84	377.19	376.74	374.89	374.39	372.79	375.49	375.39	376.09	375.44
31.....	374.39	......	378.34	......	376.94	......	374.39	372.69	......	375.39	......	375.59

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Seneca River at Mosquito Point Bridge, Port Byron, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	375.95	375.15	377.75	381.05	378.75	378.25	375.35	374.75	373.05	375.75	375.75	376.55
2.....	376.05	375.15	377.65	381.65	378.55	378.05	375.25	374.75	373.55	375.75	375.75	376.55
3.....	376.05	375.05	377.25	381.95	378.45	377.85	375.25	374.75	373.85	375.75	375.65	376.85
4.....	375.95	375.05	377.05	382.05	378.25	377.55	375.25	374.85	374.05	375.75	375.55	376.85
5.....	375.75	375.05	376.85	382.15	378.15	377.35	375.35	374.85	374.15	375.65	375.65	376.75
6.....	377.55	374.95	376.75	382.05	378.05	377.25	375.25	374.75	374.35	375.55	375.65	376.85
7.....	375.65	374.95	376.55	381.95	377.95	377.05	375.25	374.75	374.35	375.45	375.75	377.05
8.....	375.65	374.95	376.75	382.15	377.85	376.85	375.25	374.75	374.35	375.35	376.05	377.05
9.....	375.65	374.95	376.85	382.25	377.75	376.75	375.15	374.65	374.45	375.15	376.35	376.95
10.....	375.55	374.85	376.95	382.25	377.75	376.55	375.15	374.65	374.45	375.25	376.45	376.95
11.....	375.55	374.85	377.05	382.15	377.75	376.45	375.15	374.75	374.45	375.25	376.55	376.85
12.....	375.45	374.75	377.05	382.05	377.75	376.35	375.05	374.75	374.55	375.25	376.55	376.75
13.....	375.35	374.75	376.95	382.05	377.65	376.25	375.05	374.75	374.65	375.25	376.45	376.55
14.....	375.35	374.75	376.85	381.85	377.65	376.25	375.05	374.65	374.65	375.15	376.55	376.25
15.....	375.35	374.75	376.95	381.75	377.45	376.25	375.05	374.65	374.85	375.15	376.65	376.35
16.....	375.25	374.85	377.55	381.55	377.55	376.35	375.05	374.55	375.15	375.15	376.65	376.35
17.....	375.25	374.85	378.45	381.25	377.65	376.15	375.05	374.45	375.25	375.05	376.65	376.35
18.....	375.15	374.95	379.25	380.95	377.85	376.05	374.95	374.45	375.15	375.05	376.55	376.55
19.....	375.15	375.05	380.05	380.75	378.05	375.85	374.95	374.55	375.15	375.05	376.45	376.65
20.....	375.05	375.35	380.65	380.45	378.05	375.75	374.85	374.45	374.95	375.15	376.45	376.65
21.....	375.15	375.45	380.85	380.15	378.05	375.75	374.85	374.35	374.85	375.15	376.55	376.55
22.....	375.15	375.75	380.95	380.05	378.15	375.75	375.05	374.15	374.85	375.15	376.45	376.45
23.....	375.15	376.15	380.55	379.95	378.25	375.65	374.95	374.05	375.05	375.25	376.35	376.35
24.....	375.05	376.45	380.15	379.85	378.35	375.65	374.95	373.95	375.25	375.25	376.35	376.25
25.....	375.05	376.65	379.75	379.65	378.15	375.65	374.85	373.85	375.75	375.45	376.55	376.15
26.....	374.95	376.85	379.45	379.55	377.85	375.55	374.85	373.85	376.05	375.65	376.75	376.05
27.....	374.95	377.25	379.05	379.55	377.75	375.55	374.75	373.75	376.15	375.75	376.85	375.85
28.....	375.05	377.55	378.75	379.25	377.55	375.55	374.75	373.55	376.15	375.75	376.85	375.85
29.....	375.05	377.65	379.05	379.05	377.95	375.45	374.85	373.35	376.05	375.85	376.75	375.75
30.....	375.15	......	379.65	378.85	378.25	375.45	374.85	373.25	375.85	375.85	376.65	375.75
31.....	375.15	......	380.35	......	378.45	......	374.75	373.05	......	375.85	......	376.05

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Seneca River at N. Y. C. R. R. Bridge, near Fox Ridge, Savannah P. O., N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	377.90	377.70	380.30	383.20	381.40	380.90	378.30	378.00	377.50	378.10	378.20	379.00
2.....	377.70	377.60	380.20	383.60	381.30	380.80	378.30	378.00	377.80	378.10	378.10	379.10
3.....	378.40	377.60	380.10	383.80	381.20	380.60	378.30	378.00	377.90	378.20	378.00	379.30
4.....	378.30	377.60	379.90	383.90	381.00	380.40	378.30	378.00	377.90	378.20	378.00	379.30
5.....	378.80	377.50	379.70	383.70	380.90	380.20	378.30	378.00	377.90	378.10	378.00	379.20
6.....	378.70	377.60	379.50	383.70	380.80	380.00	378.30	378.00	377.80	378.10	378.00	379.20
7.....	378.70	377.60	379.40	383.80	380.70	379.90	378.30	378.00	377.80	378.00	378.00	379.30
8.....	378.70	377.60	379.20	383.80	380.60	379.90	378.30	378.00	377.80	377.90	378.10	379.30
9.....	378.50	377.60	379.20	383.80	380.50	379.80	378.30	378.00	377.70	377.90	378.20	379.20
10.....	378.20	377.60	379.20	383.80	380.40	379.70	378.20	378.00	377.70	377.90	378.30	379.20
11.....	378.10	377.50	379.30	383.80	380.40	379.60	378.20	377.90	377.70	377.80	378.50	378.80
12.....	378.00	377.60	379.30	383.80	380.30	379.50	378.20	377.90	377.70	377.80	378.70	378.60
13.....	377.90	377.60	379.00	383.70	380.30	379.40	378.20	377.80	377.70	377.70	378.70	379.40
14.....	377.90	377.50	378.90	383.50	380.30	379.30	378.20	377.70	377.70	377.70	378.70	379.00
15.....	377.90	377.50	378.80	383.50	380.20	379.50	378.10	377.60	377.70	377.70	378.80	378.70
16.....	377.90	377.50	379.70	383.30	380.20	379.40	378.10	377.60	377.90	377.80	378.70	378.60
17.....	377.80	377.50	380.80	383.10	380.30	379.30	378.10	377.60	377.90	377.80	378.70	379.10
18.....	377.80	377.50	381.40	382.90	380.70	379.10	378.10	377.60	377.80	377.90	378.70	379.00
19.....	377.90	377.50	382.20	382.70	380.90	378.90	378.10	377.60	377.80	377.90	378.70	378.70
20.....	377.70	377.70	382.70	382.50	380.80	378.90	378.10	377.70	377.70	377.90	378.60	378.50
21.....	377.70	378.20	383.10	382.40	380.80	378.90	378.20	377.50	377.70	377.80	378.60	378.50
22.....	377.80	379.00	383.20	382.30	380.90	378.80	378.10	377.30	377.80	377.80	378.60	378.40
23.....	377.80	379.10	382.90	382.20	381.00	378.80	378.10	377.70	377.90	377.80	378.60	378.30
24.....	377.80	379.30	382.60	382.20	381.00	378.70	378.10	377.70	377.90	377.90	378.70	378.20
25.....	377.70	379.50	382.10	382.10	380.80	378.70	378.00	377.70	378.40	378.00	379.00	378.20
26.....	377.70	379.70	381.80	382.10	380.60	378.70	378.00	377.60	378.60	378.30	379.10	378.20
27.....	377.70	380.00	381.50	381.80	380.40	378.60	378.00	377.70	378.70	378.30	379.00	378.10
28.....	377.80	380.20	381.30	381.70	380.30	378.60	378.00	377.60	378.40	378.30	379.00	378.00
29.....	377.80	380.50	381.60	381.50	380.50	378.50	378.00	377.50	378.30	378.20	379.00	378.00
30.....	377.80	......	382.20	381.40	380.80	378.30	378.00	377.60	378.10	378.20	379.00	378.00
31.....	377.70	......	382.80	......	381.10	......	378.00	377.50	......	378.30	......	378.00

***Mean Daily Elevation** of Water-surface (Barge Canal Datum) of Seneca River at oot of Cayuga Lake.*

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	382.12	381.72	382.35	385.02	384.32	383.22	382.32	381.82	381.74	382.27	381.92	*a*
2.....	382.12	381.72	382.37	385.22	384.22	*a*	382.30	381.87	381.84	382.30	381.87	382.14
3.....	382.12	381.67	*a*	385.32	384.17	383.17	382.32	381.82	381.90	382.37	381.77	381.92
4.....	382.07	381.42	382.22	385.34	384.12	383.24	*a*	381.77	381.87	382.34	381.87	382.00
5.....	382.17	381.42	382.22	385.34	*a*	383.22	382.27	381.82	381.94	382.32	*a*	382.07
6.....	382.02	381.42	382.22	385.47	383.94	383.20	382.27	381.77	381.92	382.22	381.84	382.12
7.....	382.07	381.42	382.22	*a*	383.92	383.12	382.22	381.80	382.02	382.32	381.77	382.17
8.....	382.02	381.60	382.22	385.62	383.92	383.12	382.20	381.94	382.00	382.24	381.84	*a*
9.....	382.07	381.58	382.22	385.62	383.77	*a*	382.12	381.97	381.94	382.24	381.90	382.20
10.....	382.17	381.60	*a*	385.62	383.72	382.97	382.12	381.97	381.97	*a*	*a*	382.22
11.....	382.07	381.42	382.34	385.62	383.72	382.94	382.12	381.84	381.92	382.17	381.94	382.17
12.....	381.97	381.55	382.35	385.57	*a*	382.90	382.02	381.87	381.97	382.37	381.92	382.04
13.....	381.82	381.55	382.32	385.47	383.62	382.82	382.12	381.84	382.02	382.22	381.97	381.92
14.....	381.87	381.55	382.35	*a*	383.57	382.87	382.02	381.92	382.07	382.12	381.94	381.92
15.....	381.87	381.55	382.42	385.37	383.47	383.12	382.00	381.84	381.92	382.04	381.87	*a*
16.....	381.82	381.55	382.47	385.22	383.44	382.90	381.92	381.72	381.87	382.02	381.84	381.90
17.....	381.77	381.55	*a*	385.04	383.60	382.80	381.92	381.74	381.97	382.12	*a*	381.82
18.....	381.72	381.42	383.30	385.10	383.64	382.64	381.94	......	381.94	382.12	381.84	381.72
19.....	381.77	381.56	383.56	385.02	*a*	382.62	381.92	381.72	382.00	382.12	381.97	381.77
20.....	381.82	381.70	383.78	385.02	383.44	382.62	382.02	381.74	381.97	381.97	381.82	381.82
21.....	381.72	381.78	383.97	*a*	383.44	382.62	381.92	381.87	381.92	382.22	381.87	381.72
22.....	381.82	381.90	384.07	384.90	383.52	382.54	381.90	381.84	382.22	382.12	381.80	*a*
23.....	381.77	381.94	384.10	384.64	383.62	382.52	381.84	381.82	382.17	381.87	381.90	381.80
24.....	381.77	382.06	*a*	384.77	383.50	382.47	381.92	381.82	382.14	381.92	*a*	381.77
25.....	381.72	381.42	384.07	384.64	383.42	382.42	381.84	381.82	382.32	381.92	381.82	*a*
26.....	381.77	382.11	384.07	384.87	*a*	382.42	381.80	381.82	382.44	381.92	382.00	381.74
27.....	381.72	382.32	383.97	384.47	383.32	382.30	381.74	381.72	382.24	381.92	381.94	381.67
28.....	381.77	382.35	383.97	*a*	383.27	382.42	381.87	381.77	382.27	381.90	*a*	381.62
29.....	381.67	382.38	384.27	384.42	383.30	382.32	381.90	381.72	382.24	382.00	382.02	*a*
30.....	381.67	......	384.72	384.32	383.30	*a*	381.80	381.70	382.27	381.92	381.97	381.67
31.....	381.72	......	*a*	......	383.30	......	381.84	381.72	......	381.92	......	381.74

a No record.

***Mean Daily Elevation** of Water-surface (Barge Canal Datum) of Seneca River below Lock No. 6 at Seneca Falls, N. Y.*

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	392.11	*a*	392.19	392.51	392.63	392.59	392.30	392.13	391.95	392.31	392.15	392.21
2.....	392.06	*a*	392.09	392.63	392.63	392.53	392.35	392.15	391.97	392.33	392.12	392.26
3.....	392.01	*a*	391.97	392.51	392.62	392.60	392.40	392.05	392.15	392.30	392.06	392.21
4.....	392.01	392.01	392.06	392.51	392.59	392.66	392.11	392.04	392.09	392.33	392.09	392.25
5.....	392.11	*a*	392.15	392.59	392.58	392.59	392.36	392.11	392.03	392.21	392.09	392.22
6.....	392.06	392.61	392.17	392.55	392.61	392.60	392.29	392.11	392.00	392.18	392.15	392.59
7.....	392.11	392.21	392.25	392.65	392.61	392.60	392.23	392.11	391.99	392.20	392.15	392.31
8.....	392.06	392.31	392.29	392.49	392.59	392.53	392.30	392.23	392.03	392.22	392.30	392.21
9.....	392.01	392.16	392.27	392.57	392.62	392.51	392.30	392.18	392.07	392.22	392.23	392.25
10.....	392.11	391.86	391.97	392.53	392.57	392.49	392.31	392.13	391.95	*a*	392.11	392.22
11.....	392.01	392.11	392.14	392.67	392.55	392.51	392.31	392.08	392.12	392.21	392.12	392.26
12.....	392.11	392.16	392.24	392.67	392.52	392.40	392.30	392.15	391.33	392.11	392.11	392.19
13.....	392.11	392.61	392.21	392.63	392.58	392.43	392.23	392.14	392.02	392.11	392.11	392.07
14.....	392.11	392.31	392.14	*a*	392.57	392.51	392.19	392.09	392.07	392.21	392.22	392.09
15.....	392.21	392.22	392.72	392.71	392.55	392.43	392.30	392.20	392.04	392.11	392.21	392.13
16.....	392.21	392.29	392.34	392.71	392.71	392.41	392.21	392.03	392.10	392.17	392.20	392.21
17.....	392.16	*a*	392.33	392.63	392.73	392.49	392.25	392.10	392.05	392.20	392.21	392.19
18.....	392.21	*a*	392.29	392.58	392.67	392.40	392.26	392.08	392.13	392.22	392.18	392.21
19.....	392.21	392.17	392.25	392.64	392.59	392.43	392.23	392.26	392.13	392.19	392.18	392.13
20.....	392.16	392.53	392.17	392.60	392.73	392.43	392.06	392.14	392.01	392.09	392.18	392.09
21.....	392.11	392.13	391.77	392.59	392.79	392.43	392.07	392.13	392.06	392.26	392.20	392.21
22.....	392.21	392.13	391.92	392.65	392.57	392.41	392.16	392.19	392.01	392.30	392.19	392.13
23.....	392.11	392.15	392.01	392.75	392.65	392.31	392.15	392.16	392.16	392.32	392.21	392.15
24.....	392.11	392.17	392.23	392.69	392.63	392.41	392.17	392.10	392.19	392.30	392.19	392.16
25.....	392.21	392.17	392.21	392.65	392.65	392.35	392.11	392.11	392.07	392.22	392.36	*a*
26.....	392.11	392.22	392.21	392.63	392.53	392.40	392.15	392.09	392.19	392.19	392.26	392.17
27.....	392.21	392.27	392.13	392.64	392.61	392.30	392.10	392.08	392.16	392.16	392.27	392.13
28.....	392.11	392.18	392.21	392.56	392.60	392.36	392.03	392.13	392.15	392.21	392.31	392.22
29.....	392.21	392.07	392.85	392.61	392.70	392.31	392.20	392.11	392.06	392.20	392.30	392.11
30.....	392.11	......	392.07	392.69	393.01	392.13	392.10	392.07	392.21	392.20	392.29	392.16
31.....	392.11	......	392.25	......	392.66	......	392.09	392.02	......	392.13	......	392.23

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Seneca River above Seneca Falls, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	429.89	429.71	429.71	429.90	430.01	429.97	429.81	429.78	429.67	429.73	429.77	429.76
2	429.87	429.79	429.61	429.94	429.99	429.91	429.84	429.78	429.65	429.74	429.78	429.89
3	429.81	429.51	429.57	429.89	430.01	429.99	429.84	429.78	429.67	429.77	429.72	429.88
4	429.81	429.71	429.61	429.89	430.01	429.98	429.79	429.78	429.69	429.79	*a*	429.89
5	429.74	429.59	429.71	429.97	430.01	429.98	429.81	429.79	429.60	429.73	*a*	429.87
6	429.59	429.74	429.69	429.94	430.01	429.97	429.78	429.78	429.71	429.70	429.74	430.04
7	429.74	429.77	429.67	429.97	429.99	429.97	429.77	429.79	429.69	429.77	429.79	429.90
8	429.84	429.74	429.77	429.99	429.99	429.93	429.79	429.79	429.69	429.77	429.81	429.82
9	429.79	429.71	429.74	429.99	429.99	429.80	429.79	429.77	429.67	429.75	429.80	429.85
10	429.74	429.64	429.57	429.99	420.99	429.91	429.79	429.81	429.59	429.73	429.70	429.89
11	429.84	429.69	429.71	429.99	429.99	429.94	429.81	429.79	420.67	429.73	429.81	429.88
12	429.79	429.69	429.74	420.99	429.94	429.91	429.79	429.78	429.68	420.70	429.78	429.89
13	429.79	429.69	429.74	429.99	429.99	429.91	429.77	429.74	429.69	429.73	429.79	429.89
14	429.79	429.71	429.74	429.99	429.94	429.91	429.77	429.77	429.66	429.78	429.84	429.84
15	429.77	429.60	429.91	430.01	429.94	429.89	420.77	429.75	429.64	429.79	429.84	429.79
16	429.74	429.71	420.71	429.99	429.97	429.89	429.77	429.75	429.67	429.77	429.83	429.85
17	429.71	429.71	429.71	429.99	430.04	429.89	429.78	429.78	429.66	429.79	429.77	429.87
18	429.69	429.69	429.77	429.99	429.97	429.85	429.79	429.79	429.73	429.81	429.85	429.87
19	429.69	429.74	429.77	430.01	430.08	429.85	429.78	429.84	429.68	429.78	429.85	429.87
20	429.69	429.81	429.74	429.97	430.04	429.85	429.77	429.84	420.67	429.76	429.81	429.87
21	429.69	429.61	429.64	429.99	430.08	420.84	429.76	429.83	429.69	429.81	429.81	429.85
22	429.60	429.67	429.69	429.99	430.01	429.85	429.78	429.78	429.67	429.80	429.84	429.87
23	429.69	420.49	429.69	430.07	430.04	420.84	429.84	429.78	429.72	429.81	429.82	429.85
24	429.69	429.67	429.60	430.01	430.01	429.85	429.81	429.74	429.79	429.79	429.81	429.89
25	429.71	429.69	429.77	429.99	430.01	429.84	429.79	429.74	420.78	429.79	429.91	429.88
26	429.77	429.74	429.77	429.99	429.91	429.83	429.83	429.69	429.77	429.75	429.90	429.83
27	429.79	429.77	429.81	429.99	429.99	429.82	429.79	429.67	429.79	429.69	429.89	429.89
28	429.69	429.80	429.87	429.99	429.99	429.81	429.77	429.64	429.73	429.78	429.81	429.85
29	429.74	429.67	430.33	429.99	430.01	429.84	429.81	420.67	429.73	429.79	429.89	429.83
30	429.74	......	429.79	430.01	430.37	429.79	429.81	429.64	429.75	429.79	429.89	429.83
31	429.69	......	429.79	......	430.01	......	429.77	429.64	......	429.75	......	429.82

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Seneca River below Waterloo, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.
1912.							
1	430.78	430.93	430.13	*a*	430.73	431.48	430.31
2	430.83	430.93	430.18	430.51	430.71	430.79	430.28
3	430.83	430.93	430.13	430.48	430.73	430.81	430.41
4	430.83	429.93	430.08	430.58	430.70	430.82	430.25
5	430.88	429.93	429.98	430.62	430.63	430.78	430.43
6	430.83	429.93	429.98	430.68	430.67	430.72	430.33
7	430.83	429.93	429.93	430.75	430.65	430.71	430.25
8	430.83	429.93	429.88	430.78	430.67	430.63	430.28
9	430.83	429.93	429.88	430.68	430.68	430.51	430.43
10	430.83	429.93	429.93	430.73	430.63	430.58	430.23
11	430.83	429.93	429.83	430.72	430.66	430.53	430.43
12	430.83	430.03	429.83	430.73	430.65	430.58	430.41
13	430.83	430.03	429.83	430.72	430.65	430.51	430.37
14	430.83	430.03	429.93	430.58	430.63	430.53	430.31
15	430.83	429.98	429.93	430.68	430.64	430.53	430.33
16	430.88	430.08	429.93	430.63	430.75	430.48	430.32
17	430.88	430.23	429.98	430.68	431.03	430.53	430.43
18	430.93	430.18	429.88	430.73	430.88	430.50	430.32
19	430.93	430.13	429.83	430.75	430.58	430.43	430.43
20	430.93	430.13	429.83	430.68	430.76	430.53	430.31
21	430.93	430.13	429.83	430.53	430.75	430.48	430.33
22	430.93	230.13	429.83	430.68	430.73	430.48	430.43
23	430.93	430.13	429.88	430.72	430.75	430.23	430.42
24	430.93	430.18	429.93	430.78	430.82	430.53	430.33
25	430.93	430.23	429.83	430.75	430.75	430.53	430.31
26	430.93	430.13	429.83	430.81	430.68	430.49	430.33
27	430.93	430.13	429.83	430.73	430.76	430.35	430.29
28	430.93	430.13	429.83	430.68	430.73	430.31	430.35
29	430.93	430.13	431.08	430.75	430.83	430.25	430.48
30	430.93	......	431.03	430.81	432.13	430.23	430.43
31	430.93	......	431.03	......	430.93	......	430.38

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Seneca River above Waterloo, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.
1912.							
1	444.37	444.52	444.47	*a*	446.27	445.57	445.87
2	444.37	444.57	444.47	446.06	446.26	446.42	445.65
3	444.37	444.57	444.47	446.05	446.26	446.42	445.62
4	444.47	444.57	444.47	446.12	446.27	446.32	445.87
5	444.47	444.57	444.47	446.21	446.37	446.27	445.57
6	444.47	444.57	444.42	446.23	446.27	446.27	445.47
7	444.57	444.57	444.42	446.47	446.26	446.26	445.87
8	444.57	444.57	444.42	446.52	446.25	446.25	445.56
9	444.57	444.57	444.37	446.32	446.26	446.36	445.22
10	444.57	444.57	444.47	446.27	446.27	446.25	445.52
11	444.57	444.57	444.62	446.26	446.29	446.23	445.17
12	444.57	444.57	444.72	446.25	446.35	446.25	444.97
13	444.57	444.57	444.87	446.26	446.27	446.27	444.95
14	444.57	444.57	444.87	446.36	446.23	446.22	445.55
15	444.57	444.57	444.82	446.27	446.24	446.21	445.35
16	444.57	444.62	444.92	446.26	446.29	446.35	445.05
17	444.57	444.67	444.97	446.31	446.42	446.17	444.94
18	444.57	444.67	444.97	446.27	446.35	446.17	444.89
19	444.57	444.57	444.92	446.32	446.45	446.07	444.85
20	444.57	444.57	444.92	446.27	446.34	446.05	445.17
21	444.57	444.57	444.87	446.37	446.30	445.97	445.87
22	444.57	444.57	444.87	446.27	446.35	445.97	445.22
23	444.57	444.57	444.87	446.31	446.32	446.17	444.92
24	444.57	444.62	444.82	446.39	446.29	445.87	445.32
25	444.57	444.57	444.87	446.32	446.27	445.85	445.34
26	444.57	444.57	444.87	446.29	446.37	445.87	445.22
27	444.57	444.52	444.82	446.27	446.27	445.86	445.27
28	444.57	444.57	444.87	446.33	446.29	446.02	445.77
29	444.57	444.52	445.92	446.27	446.54	445.95	445.72
30	444.57	......	446.17	446.29	446.76	446.02	445.42
31	444.57	......	446.17	......	446.37	......	445.17

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Seneca River below Guard-lock near Geneva, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	444.93	444.58	444.83	446.48	447.33	447.33	446.93	446.88	446.78	447.18	446.93	446.83
2	444.93	444.58	444.83	446.58	447.33	447.38	446.93	446.88	446.78	447.08	446.88	446.83
3	444.93	444.58	444.88	446.63	447.33	447.43	446.93	446.88	446.88	447.13	446.83	446.83
4	444.93	444.58	444.83	446.78	447.23	447.38	446.93	446.73	446.88	447.03	446.83	446.83
5	444.93	444.53	444.78	446.83	447.23	447.38	446.98	446.83	446.98	447.08	446.83	446.83
6	444.93	444.53	444.78	446.88	447.28	447.28	446.93	446.78	446.98	447.13	446.83	446.93
7	444.88	444.43	444.83	447.03	447.23	447.28	446.93	446.78	446.98	447.08	446.83	446.88
8	444.88	444.43	444.78	447.08	447.28	447.28	446.88	446.83	447.03	447.03	446.88	446.88
9	444.88	444.43	444.78	447.08	447.23	*a*	446.93	446.83	446.98	446.98	446.83	446.83
10	444.88	444.43	444.93	447.13	447.23	447.23	446.98	446.83	447.03	447.08	446.93	446.83
11	444.88	444.38	444.93	447.18	447.23	447.23	446.93	446.83	447.03	447.08	446.93	446.88
12	444.88	444.33	444.93	447.18	447.23	447.18	446.83	446.83	446.93	447.03	446.93	446.83
13	444.88	444.33	444.88	447.23	447.28	447.23	446.93	446.78	446.98	447.08	446.98	446.83
14	444.88	444.28	444.93	447.28	447.23	447.23	446.93	446.73	446.98	447.03	446.98	446.78
15	444.88	444.33	445.08	447.28	447.23	447.23	446.88	446.73	446.93	446.98	446.88	446.78
16	444.98	444.23	445.28	447.28	447.33	447.23	446.98	446.73	446.93	446.93	446.88	446.68
17	444.88	444.23	445.38	447.23	447.33	447.13	446.88	446.73	446.98	446.98	446.93	446.78
18	444.88	444.33	445.48	447.23	447.38	447.13	446.88	446.78	446.93	446.98	446.88	446.73
19	444.86	444.33	445.48	447.23	447.43	447.08	446.88	446.73	446.98	446.93	446.88	446.73
20	444.83	444.33	445.63	447.23	447.33	447.08	446.88	446.73	446.93	446.83	446.83	446.68
21	444.83	444.43	445.68	447.23	447.23	447.03	446.93	446.73	446.83	446.98	446.88	446.73
22	444.83	444.43	445.58	447.33	447.43	447.08	446.88	446.78	446.93	446.98	446.88	446.73
23	444.78	444.43	445.73	447.33	447.38	447.08	446.83	446.68	446.98	446.88	446.83	446.68
24	444.78	444.43	445.68	447.38	447.33	447.03	446.88	446.78	446.98	446.83	446.83	446.63
25	444.78	444.53	445.68	447.33	447.23	447.03	446.83	446.68	447.13	446.88	446.88	446.73
26	444.78	444.53	445.63	447.33	447.23	446.98	446.78	446.68	447.18	446.93	446.83	446.63
27	444.78	444.58	445.73	447.28	447.23	446.98	446.78	446.78	447.08	446.93	446.83	446.58
28	444.68	444.73	445.73	447.23	447.28	447.03	446.83	446.68	447.13	446.83	446.83	446.63
29	444.58	444.88	446.03	447.23	447.33	446.98	446.83	446.68	447.13	446.88	446.88	446.63
30	444.58	......	446.18	447.33	447.43	446.98	446.88	446.68	447.13	446.83	446.83	446.63
31	444.58	......	446.43	......	447.38	......	446.88	446.68	......	446.83	......	446.63

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Seneca River above Guard-Lock, near Geneva, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1......	444.93	444.58	444.83	446.48	447.33	447.33	446.93	446.88	446.78	447.18	446.93	446.83
2......	444.93	444.58	444.83	446.58	447.33	447.38	446.93	446.88	446.78	447.08	446.88	446.83
3......	444.93	444.58	444.88	446.63	447.33	447.43	446.93	446.88	446.88	447.13	446.83	446.83
4......	444.93	444.58	444.83	446.78	447.23	447.38	446.93	446.73	446.88	447.03	446.83	446.83
5......	444.93	444.53	444.78	446.83	447.23	447.38	446.98	446.83	446.98	447.08	446.83	446.83
6......	444.93	444.53	444.78	446.88	447.28	447.28	446.93	446.78	446.98	447.13	446.83	446.93
7......	444.88	444.43	444.83	447.03	447.23	447.28	446.93	446.78	446.98	447.08	446.83	446.88
8......	444.88	444.43	444.78	447.08	447.28	447.28	446.88	446.83	447.03	447.03	446.88	446.88
9......	444.88	444.43	444.78	447.08	447.23	*a*	446.93	446.83	446.98	446.98	446.83	446.83
10......	444.88	444.43	444.93	447.13	447.23	447.23	446.98	446.83	447.03	447.08	446.93	446.83
11......	444.88	444.38	444.93	447.18	447.23	447.23	446.93	446.83	447.03	447.08	446.93	446.88
12......	444.88	444.33	444.93	447.18	447.23	447.18	446.83	446.83	446.93	447.03	446.93	446.83
13......	444.88	444.33	444.88	447.23	447.28	447.23	446.93	446.78	446.98	447.08	446.98	446.83
14......	444.88	444.28	444.93	447.28	447.23	447.23	446.93	446.73	446.98	447.03	446.98	446.78
15......	444.88	444.28	445.08	447.28	447.23	447.23	446.88	446.73	446.93	446.98	446.88	446.78
16......	444.98	444.23	445.28	447.28	447.33	447.23	446.98	446.73	446.93	446.93	446.88	446.68
17......	444.88	444.28	445.38	447.23	447.33	447.13	446.88	446.73	446.98	446.98	446.93	446.78
18......	444.88	444.33	445.48	447.23	447.38	447.13	446.88	446.78	446.93	446.98	446.88	446.73
19......	444.88	444.33	445.48	447.23	447.43	447.08	446.88	446.73	446.98	446.93	446.88	446.73
20......	444.83	444.33	445.63	447.23	447.33	447.08	446.88	446.73	446.93	446.83	446.83	446.68
21......	444.83	444.38	445.68	447.23	447.23	447.03	446.93	446.73	446.83	446.98	446.88	446.73
22......	444.83	444.43	445.58	447.33	447.43	447.08	446.88	446.78	446.93	446.98	446.88	446.73
23......	444.78	444.43	445.73	447.33	447.38	447.08	446.83	446.68	446.98	446.88	446.83	446.68
24......	444.78	444.48	445.68	447.38	447.33	447.03	446.88	446.73	446.98	446.83	446.83	446.63
25......	444.78	444.53	445.68	447.33	447.23	447.03	446.83	446.68	447.13	446.88	446.88	446.73
26......	444.78	444.53	445.63	447.33	447.23	446.98	446.78	446.68	447.18	446.93	446.83	446.63
27......	444.78	444.58	445.73	447.28	447.23	446.98	446.78	446.73	447.08	446.93	446.83	446.58
28......	444.68	444.73	445.73	447.23	447.28	447.03	446.83	446.68	447.13	446.83	446.83	446.63
29......	444.58	444.88	445.93	447.23	447.33	446.98	446.83	446.68	447.13	446.88	446.88	446.63
30......	444.58	......	446.18	447.33	447.43	446.93	446.88	446.68	447.13	446.83	446.83	446.63
31......	444.58	......	446.43	......	447.38	......	446.88	446.68	......	446.83	......	446.63

a No record.

SENECA LAKE AT GENEVA, N. Y.

Tables are included showing the elevation of water-surface of Seneca lake at the Geneva city pumping station, located about 2 miles south of Geneva on the west shore of the lake. These records are not referred to Barge canal datum, but are referred to the U. S. Geological Survey datum. A table is also presented showing the elevation of water-surface of Seneca lake at Geneva at various times. The data for this table was contributed by Mr. W. S. Wood, Superintendent of the Department of Public Works of Geneva.

The gage used at Geneva pumping station consists of two galvanized steel sections subdivided to feet and tenths. It is secured to a vertical post in the intake well of the pumping station. The elevation of the zero mark is 440.78, U. S. Geological Survey datum. The water elevation in the pump well is the same as in the lake. Readings are taken once each week.

Mean Daily Elevation of Water-surface (U. S. G. S. Datum) of Seneca Lake at Pumping Station, Geneva, N. Y.

DAY.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.										
1		445.68				445.88				
2										
3										
4				445.78	446.08		445.98			
5										
6			446.28			445.78				
7										
8		446.28								
9										
10										
11	443.78			446.38						
12										
13			446.28			445.88				
14										
15										
16		446.28								
17										445.88
18	444.48			446.18						
19									445.98	
20			446.38							
21										
22					446.08					
23		449.58						445.98		
24										
25										445.78
26	444.78								445.88	
27										
28			446.38			445.88				
29		446.48			445.88					
30								445.88		
31										

Data of Elevation of Seneca Lake at Steamboat Landing, Geneva, N. Y.

DATE.	Geneva datum (L. V. R. R.).	U. S. G. S. datum.	Taken by
April 11, 1900	437.28	428.65	Chas. T. Church.
Dec. 20, 1900	*434.60	425.97	Chas. T. Church.
April 24, 1901	†438.96	430.33	Chas. T. Church.
Mar. 6, 1902	437.94	429.31	Chas. T. Church.
Mar. 23, 1903	438.04	429.41	P. H. Brennan.
April 6, 1903	438.96	430.33	P. H. Brennan.
April 9, 1903	438.91	430.28	P. H. Brennan.
May 14, 1903	438.00	429.37	P. H. Brennan.
Sept. 25, 1903	437.78	429.15	P. H. Brennan.
Nov. 17, 1903	437.62	428.99	P. H. Brennan.
Jan. 15, 1904	436.50	427.87	P. H. Brennan.
Feb. 8, 1904	437.50	428.87	P. H. Brennan.
Mar. 8, 1904	438.08	429.45	P. H. Brennan.
Mar. 29, 1904	438.64	430.01	P. H. Brennan.
April 21, 1904	438.64	430.01	P. H. Brennan.
April 29, 1904	438.81	430.18	P. H. Brennan.
May 14, 1904	438.47	429.84	P. H. Brennan.
Nov. 3, 1904	436.59	427.96	P. H. Brennan.
Nov. 9, 1904	436.42	427.79	P. H. Brennan.
Dec. 6, 1904	435.77	427.14	P. H. Brennan.
Dec. 13, 1904	435.72	427.09	P. H. Brennan.
Feb. 8, 1905	435.40	426.77	P. H. Brennan.
Mar. 15, 1905	435.07	426.44	P. H. Brennan.
April 24, 1905	437.32	428.69	P. H. Brennan.
June 21, 1905	438.37	429.74	P. H. Brennan.
Sept. 13, 1905	436.31	427.68	P. H. Brennan.
Feb. —, 1909	435.14	426.51	P. H. Brennan.
July —, 1909	437.41	428.78	P. H. Brennan.
Dec. —, 1909	435.02	426.39	P. H. Brennan.

* Lowest. † Highest.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Clyde River at Clyde, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.
1912.									
1	380.70	380.10	382.60	387.50	383.50	383.40	380.40	380.50	380.50
2	380.00	380.10	382.30	387.90	383.30	383.10	380.30	380.40	380.50
3	380.50	379.90	382.00	387.70	383.00	383.00	380.30	380.40	380.60
4	380.40	380.10	381.80	386.90	382.90	382.90	380.40	380.40	380.70
5	380.50	380.10	381.60	386.20	382.90	382.70	380.50	380.50	380.60
6	380.50	380.00	381.50	386.10	382.80	382.40	380.40	380.50	380.50
7	380.40	380.20	381.50	386.10	382.80	382.20	380.40	380.50	380.60
8	380.40	380.30	381.30	386.20	382.60	382.00	380.40	380.50	380.30
9	380.30	380.10	381.70	386.30	382.50	381.80	380.50	380.40	380.20
10	380.30	380.10	381.70	386.20	382.40	381.80	380.40	380.40	380.20
11	380.30	380.10	381.70	386.30	382.40	381.60	380.30	380.40	380.20
12	380.30	380.10	381.60	386.10	382.40	381.50	380.40	380.40	380.10
13	380.10	380.10	381.50	385.90	382.30	381.30	380.40	380.40	380.10
14	380.00	380.30	381.60	385.40	382.20	381.30	380.40	380.50	380.10
15	379.80	380.20	381.90	385.10	382.10	381.10	380.40	380.50	380.10
16	379.90	380.30	384.00	384.90	382.20	381.10	380.40	380.50	380.10
17	379.90	380.30	385.40	384.60	383.80	381.10	380.40	380.40	380.30
18	379.90	380.40	387.85	384.40	384.10	381.10	380.40	380.50	380.40
19	379.90	380.50	389.45	384.40	383.30	380.90	380.40	380.60	380.40
20	379.80	380.50	389.50	384.30	383.10	380.80	380.40	380.50	380.40
21	379.90	381.60	388.25	384.20	383.70	380.70	380.40	380.50	380.50
22	379.80	382.40	387.10	384.10	383.80	380.70	380.50	380.60	380.50
23	379.90	382.30	386.20	384.10	383.80	380.60	380.40	380.50	380.60
24	380.00	382.80	385.00	384.10	383.30	380.60	380.30	380.50	380.70
25	380.10	381.80	384.30	384.10	383.00	380.60	380.30	380.50	381.00
26	380.00	382.20	383.70	384.00	382.80	380.50	380.30	380.40	381.10
27	380.00	382.70	383.40	383.90	382.50	380.50	380.30	380.40	381.00
28	379.80	383.30	383.70	383.70	382.50	380.50	380.30	380.40	380.80
29	379.80	383.00	385.40	383.50	382.90	380.50	380.30	380.40	380.80
30	379.90	......	386.60	383.10	383.20	380.40	380.60	380.40	380.70
31	379.70	......	387.00	......	383.50	......	380.50	380.40	......

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Clyde River at Geneva St., Lyons N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	392.80	392.00	393.90	398.50	393.60	393.00	391.80	392.40	390.40	390.50	390.80	391.10
2	392.85	392.00	393.90	399.20	393.40	392.80	391.80	392.40	390.60	390.20	390.80	391.00
3	392.60	392.00	393.30	397.80	393.10	392.50	392.00	392.60	391.40	390.40	390.80	391.10
4	392.60	392.00	392.70	396.20	392.90	392.30	392.10	392.40	390.70	390.30	390.80	391.40
5	392.60	392.10	392.70	396.30	392.60	392.40	392.50	392.80	390.60	390.10	390.60	391.30
6	392.60	392.20	392.80	396.80	392.30	392.00	392.20	391.60	390.60	390.10	390.50	391.40
7	392.60	392.00	392.80	396.90	392.60	391.90	392.10	391.60	390.50	390.10	390.70	391.50
8	392.60	392.00	392.80	396.90	392.50	391.90	392.10	391.60	390.40	390.10	391.40	391.10
9	392.60	392.10	393.20	396.10	392.60	391.90	392.00	391.20	390.10	390.00	391.60	390.90
10	392.60	392.10	393.20	396.80	392.50	391.90	392.00	391.20	390.10	390.10	391.10	391.00
11	392.60	392.20	393.20	396.40	392.40	391.80	392.00	391.20	389.80	390.00	390.90	391.30
12	392.60	392.00	393.10	396.10	392.40	391.70	392.20	391.30	389.90	390.00	391.20	392.80
13	392.60	392.00	393.00	395.60	392.30	391.60	392.20	390.80	389.90	390.10	391.20	392.10
14	392.50	392.00	392.90	394.60	392.20	391.50	392.30	390.80	390.00	390.30	391.50	390.70
15	392.50	392.10	393.80	394.60	392.00	391.60	392.40	390.50	389.90	390.30	391.50	390.80
16	392.50	392.40	396.90	394.80	392.10	391.80	392.50	390.50	390.20	390.70	391.60	391.00
17	392.50	392.30	398.30	394.40	395.10	391.90	392.40	390.50	390.20	390.30	391.40	390.90
18	392.50	392.30	399.70	394.00	394.30	391.70	392.40	390.50	390.30	390.10	391.20	390.60
19	392.50	392.40	400.00	394.00	393.50	391.90	392.30	390.60	390.40	390.30	391.80	390.70
20	392.50	392.40	399.60	393.80	393.00	391.90	392.30	390.60	390.30	390.30	391.40	390.80
21	392.20	394.00	398.30	393.80	393.30	391.80	392.30	390.60	390.30	390.40	390.90	390.80
22	392.20	393.70	395.80	393.80	393.90	391.80	392.20	390.80	390.20	390.40	390.50	390.80
23	392.40	393.50	395.50	394.00	393.70	391.80	392.20	390.40	390.30	390.50	390.60	390.80
24	392.40	393.40	394.70	394.00	393.30	391.90	392.20	390.40	390.70	391.00	390.80	390.60
25	392.30	393.60	394.00	393.80	393.20	391.90	392.20	390.40	391.30	391.20	391.00	390.50
26	392.20	393.90	393.60	393.80	392.80	391.90	392.20	390.50	390.80	301.30	391.50	390.50
27	392.20	393.90	393.50	393.40	392.60	391.90	392.20	390.50	390.80	391.10	391.40	390.70
28	392.20	393.90	394.30	393.30	392.50	391.90	392.10	390.30	390.60	391.00	391.20	390.50
29	392.10	393.90	397.80	393.20	393.30	391.80	392.60	390.30	390.90	390.90	391.10	390.50
30	392.10	......	398.30	393.60	393.50	391.80	392.60	390.20	390.70	390.90	391.10	390.70
31	392.00	......	398.40	......	393.20	......	392.60	390.20	......	390.90	......	390.60

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Ganargua Creek, North of Newark, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	408.80	407.10	408.50	414.00	408.80	409.20	407.30	408.00	408.90	407.80	408.10	408.70
2.....	408.80	407.10	408.80	413.80	408.90	409.00	407.30	407.90	408.90	407.90	408.20	408.90
3.....	408.70	407.00	408.80	412.70	408.60	408.90	407.40	407.80	409.00	408.10	408.40	409.20
4.....	408.70	407.00	408.90	412.40	408.50	408.60	407.40	407.90	409.10	408.10	408.40	409.30
5.....	408.70	407.10	409.00	412.20	408.70	408.50	407.60	407.80	408.90	408.00	408.40	409.30
6.....	408.60	407.00	409.10	412.00	408.60	408.10	407.60	407.80	408.90	408.20	408.20	409.40
7.....	408.60	407.00	409.00	412.10	408.50	407.90	407.70	407.90	408.80	408.40	408.20	409.40
8.....	408.30	407.00	409.00	411.90	408.50	407.80	407.70	407.90	408.70	408.70	408.20	409.40
9.....	408.00	407.00	408.90	411.70	408.40	407.90	407.80	408.10	408.60	409.00	408.20	409.30
10.....	407.80	407.00	408.90	411.60	408.40	407.90	408.00	408.00	408.70	409.00	408.30	409.30
11.....	407.40	407.00	408.90	411.30	408.30	407.80	408.00	407.80	408.50	409.10	408.10	409.30
12.....	407.10	407.10	409.20	411.10	408.50	407.80	408.10	407.80	408.00	408.90	408.10	409.40
13.....	407.00	407.10	409.30	410.80	408.60	407.70	408.20	407.80	407.60	409.00	408.10	409.30
14.....	407.00	407.00	409.85	410.20	408.90	407.80	408.00	408.00	407.20	409.10	408.20	409.20
15.....	407.00	407.00	412.00	409.70	409.20	407.70	408.00	408.00	407.30	409.20	408.20	409.20
16.....	407.00	407.00	413.45	409.40	410.10	407.70	408.20	408.10	407.50	409.10	408.30	409.20
17.....	407.00	407.00	414.50	409.10	410.40	407.60	408.30	408.30	407.30	409.10	408.40	409.30
18.....	407.00	407.10	414.90	408.90	409.90	407.50	408.30	408.30	407.30	409.20	408.30	409.20
19.....	407.10	407.20	415.55	408.90	409.80	407.50	408.10	408.20	407.30	409.00	408.30	409.20
20.....	407.00	407.30	415.50	408.70	409.80	407.50	408.00	408.10	407.40	409.10	408.20	409.10
21.....	407.00	407.20	415.10	408.70	409.90	407.40	408.20	408.20	407.40	409.00	408.20	409.10
22.....	407.00	407.20	414.45	408.60	410.10	407.40	408.40	408.40	407.20	409.00	408.20	409.20
23.....	407.00	407.10	413.60	408.80	410.00	407.30	408.20	408.60	407.20	409.20	408.30	409.20
24.....	407.00	407.10	412.75	408.60	409.70	407.40	408.20	408.50	407.30	409.00	408.40	409.20
25.....	407.00	407.40	412.00	408.50	409.30	407.20	408.30	408.70	407.40	409.10	408.40	409.30
26.....	407.00	407.70	412.00	408.50	409.30	407.20	408.40	408.80	407.40	409.00	408.50	409.30
27.....	407.00	407.90	412.60	408.50	409.20	407.00	408.20	408.80	407.30	408.80	408.50	409.20
28.....	407.00	408.20	413.30	408.60	409.10	407.00	408.30	408.60	407.30	408.60	408.50	409.20
29.....	407.10	408.30	414.00	408.80	409.40	407.10	408.20	408.60	407.40	408.30	408.40	409.20
30.....	407.10	......	414.50	408.80	409.70	406.90	408.10	408.70	407.60	408.30	408.60	409.30
31.....	407.00	......	413.50	......	409.40	......	408.10	408.80	......	408.10	......	409.30

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Ganargua Creek near Palmyra, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	422.23	421.78	422.33	425.08	422.58	422.63	421.53	421.93	421.88	422.18	422.18	422.28
2.....	422.23	421.73	422.03	424.98	422.18	422.48	421.78	422.08	422.18	422.08	422.13	422.33
3.....	422.28	421.73	422.33	423.58	422.03	422.43	421.73	422.03	422.13	422.08	422.13	422.43
4.....	422.18	421.78	422.33	423.13	421.98	422.23	421.98	422.03	422.43	422.03	422.18	422.83
5.....	422.03	421.83	422.23	423.45	421.83	422.33	422.13	422.13	422.13	422.13	422.18	422.48
6.....	422.03	421.78	422.13	423.53	421.83	422.33	422.18	422.08	421.68	422.13	422.13	422.43
7.....	421.88	421.73	422.23	423.33	421.88	422.23	422.08	422.08	421.03	422.08	422.23	422.83
8.....	421.78	421.73	422.33	423.68	421.98	422.18	421.88	422.03	421.03	422.03	422.33	422.33
9.....	421.78	421.68	422.38	423.13	422.08	422.13	421.83	421.88	421.03	422.13	422.43	422.13
10.....	421.73	421.73	422.43	423.73	421.98	422.08	421.93	421.83	421.83	422.13	422.43	422.33
11.....	421.53	421.63	422.43	423.33	421.93	422.08	421.98	421.78	422.03	422.13	422.23	422.23
12.....	421.63	421.63	422.33	423.18	421.53	422.03	422.08	421.78	421.93	422.08	422.33	422.13
13.....	421.63	421.58	422.28	423.13	421.63	422.03	422.03	421.48	421.93	422.28	422.28	422.23
14.....	421.68	421.53	422.33	422.73	421.78	422.08	422.03	421.73	422.03	421.98	422.33	421.98
15.....	421.63	421.53	422.83	422.53	420.53	421.98	422.08	421.68	422.08	422.28	422.43	422.13
16.....	421.58	421.63	424.83	422.83	422.33	421.98	422.23	421.73	422.03	422.23	422.38	422.13
17.....	421.53	421.58	424.58	422.83	423.78	422.03	422.18	421.63	422.03	422.28	422.48	422.13
18.....	421.23	421.63	425.83	422.53	423.03	421.98	422.13	421.88	421.93	422.28	422.33	422.13
19.....	421.28	421.73	425.23	422.53	422.78	421.93	422.03	421.73	422.03	422.03	422.33	422.03
20.....	421.23	422.53	424.93	422.38	422.53	421.63	422.03	421.53	422.43	422.28	422.43	421.98
21.....	422.08	423.13	423.33	422.23	422.58	421.93	421.93	421.53	422.23	422.28	422.38	421.93
22.....	422.13	423.03	423.03	422.23	422.83	421.98	421.93	422.03	422.13	422.33	422.18	422.03
23.....	421.93	422.53	423.03	422.48	423.03	421.93	421.93	421.93	422.23	422.28	422.13	421.93
24.....	421.88	422.28	422.88	422.33	422.83	421.93	421.98	421.93	422.18	422.43	422.18	422.08
25.....	421.88	422.53	422.83	422.38	422.63	421.88	421.88	421.88	422.23	422.43	422.23	421.98
26.....	421.93	422.73	422.53	422.23	422.53	421.88	421.03	421.93	422.23	422.43	422.53	422.13
27.....	421.93	422.93	422.53	421.83	422.53	421.93	421.53	421.98	422.28	422.38	422.48	423.03
28.....	421.88	423.03	423.13	422.18	422.43	421.93	421.78	422.03	422.33	422.43	422.38	422.08
29.....	421.88	422.93	425.28	422.23	422.53	421.88	421.83	421.88	422.23	422.38	422.33	422.13
30.....	421.83	......	424.98	422.28	422.63	421.88	422.03	421.73	422.23	422.28	422.43	422.08
31.....	421.83	......	423.83	......	422.73	......	422.03	421.93	......	422.33	......	422.18

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Canandaigua Outlet at Allcway, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	404.42	404.52	406.62	409.72	406.02	405.22	404.12	404.22	403.82	404.32	404.12	404.42
2	404.32	404.62	406.52	409.12	405.72	404.92	404.12	404.22	404.42	404.32	404.22	404.52
3	404.32	404.72	406.52	408.52	405.52	404.62	404.12	404.12	404.32	404.22	404.32	404.42
4	404.62	404.72	406.22	408.12	405.32	404.52	404.12	403.92	404.22	404.12	404.22	404.32
5	404.72	404.72	405.82	408.32	405.32	404.52	404.02	403.92	404.12	404.12	404.02	404.22
6	404.52	404.72	405.72	407.92	405.32	404.52	403.92	404.12	403.92	404.12	403.92	404.12
7	404.42	404.92	405.92	407.92	405.32	404.62	403.92	404.42	403.92	404.02	404.02	404.52
8	404.32	404.72	406.62	407.92	405.32	404.72	404.22	404.32	403.92	403.92	404.52	404.92
9	404.32	404.72	407.12	407.92	405.32	404.72	404.32	404.12	403.92	403.92	404.52	404.92
10	404.42	404.72	407.12	408.22	405.22	404.62	404.32	404.02	403.92	403.92	404.52	404.92
11	404.52	404.62	407.12	408.32	405.12	404.52	404.22	403.92	403.92	403.92	404.52	404.92
12	404.52	404.52	407.12	407.92	405.12	404.52	404.12	404.22	403.92	403.92	404.52	405.52
13	404.32	404.52	407.12	407.32	405.12	404.52	403.92	404.02	403.92	403.92	404.42	405.62
14	404.32	404.52	407.12	407.12	405.12	404.52	404.02	403.92	403.92	403.92	404.32	405.02
15	404.32	404.62	408.12	407.12	405.42	404.52	404.22	404.12	404.02	403.92	404.32	404.92
16	404.22	404.72	410.72	407.02	405.62	404.52	404.32	404.12	404.12	403.92	404.32	404.92
17	404.12	404.72	410.32	406.92	406.92	404.52	404.22	404.12	404.12	403.92	404.32	404.52
18	404.12	404.72	410.92	406.92	406.22	404.52	404.12	404.32	404.12	403.92	404.32	404.32
19	404.12	404.92	409.92	406.72	405.92	404.42	403.92	404.12	404.12	403.92	404.32	404.62
20	404.12	405.92	409.02	406.52	405.92	404.32	403.92	404.02	404.12	403.92	404.32	404.72
21	404.12	407.32	407.72	406.52	405.92	404.32	404.12	403.92	404.12	403.92	404.32	404.52
22	404.32	406.62	407.22	406.52	405.92	404.42	404.22	403.92	404.12	403.92	404.22	404.52
23	404.42	405.72	407.22	406.92	405.92	404.52	404.12	403.92	404.12	403.92	404.12	404.52
24	404.62	405.72	407.12	406.62	405.62	404.42	404.02	403.92	404.32	404.02	404.12	404.52
25	404.72	405.72	407.12	406.52	405.32	404.32	403.92	403.92	404.52	404.22	404.12	404.52
26	404.72	406.52	407.12	406.42	405.32	404.22	403.92	403.92	404.52	404.32	404.22	404.52
27	404.72	407.62	407.12	406.32	405.32	404.12	403.92	404.02	404.42	404.52	404.32	404.52
28	404.72	407.12	407.52	406.32	405.32	404.12	403.92	404.12	404.32	404.42	404.32	404.52
29	404.62	406.72	409.22	406.22	405.32	404.12	404.22	404.02	404.32	404.22	404.32	404.52
30	404.52	......	409.12	406.12	405.52	404.12	404.42	403.92	404.32	404.12	404.32	404.62
31	404.52	......	408.22	......	405.52		404.22	403.92	......	404.12	......	404.92

SKANEATELES LAKE AND OUTLET.

Skaneateles lake outlet enters Seneca river above Cross lake, crossing the Erie canal at Jordan. The fall from the foot of the lake at this point is 465 feet.

The surface of the lake has an elevation of 865 feet above tide. The valley on each side of the lake has an average width of 2.5 miles, and in this distance there is a rise of 400 to 800 feet, the greater part of it being within a mile of the lake. The inflow to the lake is through numerous short lateral feeders flowing down these slopes. The drainage areas of the lake are shown below:

*Drainage area of Skaneateles Lake.**

	Square miles.
Land surface above State dam at Skaneateles	60.25
Water surface of lake at Skaneateles	12.75
Total drainage area above foot of lake (water surface = 17.46 per cent)	73.00
Total area above Willow Glen weir	74.25
Area above Erie canal at Jordan	93.00

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* Areas here given have been taken from proceedings in condemnation of water-powers on Skaneateles outlet. The lake and its tributary area are shown on the Skaneateles, Tully, Cortland and Moravia topographic atlas sheets of the United States Geological Survey.

SENECA RIVER.

SENECA RIVER BELOW LOCK NO. 6 AT SENECA FALLS, N. Y.

The gage was established on Seneca river below Seneca Falls on November 16, 1909, by L. S. Hulburd for this Department. The gage consist of a 5-ft. enameled steel section, fastened to a pile near the right-hand, downstream bank just above the State weir at Seneca Falls. The elevation of the zero mark of the gages is 391.41, Barge canal datum. The weir is utilized to calculate the discharge of the river at this point. The small quantity of water which is diverted around the dam by leakage through the flume of an abandoned water power has been measured and is included in the estimated flow. An estimate of the quantity of water used for canal purposes is also made from a record of the operation of the adjacent locks. The channel of approach above the weir is shallow and irregular and is obstructed by ice in the winter season. The crest of the dam is also somewhat irregular and flash-boards are usually maintained thereon. Owing to these conditions the estimate of discharge cannot be made as precise as it is desired and the record is published as approximate only and is subject to revision.

Current-meter Discharge Measurements of Seneca River at Rumsey Street Bridge, Seneca Falls, N. Y.

DATE.	Hydrographer.	GAGE READING.			Meter No.	Lateral interval.	Submergence depth.	Total area.	Total width.	Computed discharge.
		Beginning.	Ending.	Mean.						
1912.						*Feet.*		*Sq. ft.*	*Feet.*	*Sec.-ft.*
Jan. 31 [a]	Duschak & Babcock..	[b]4.75	[b]4.75	[b]4.75	462	10	0.6	529	90	259
Feb. 19 [a]	E. A. Duschak.......	[b]4.55	......	......	462	10	0.6	594	90	415
Mar. 18	E. A. Duschak.......	[b]4.50	[b]4.52	[b]4.51	462	10	0.6	841	204	554
Mar. 29	E. A. Duschak.......	[b]3.78	[b]3.94	[b]3.86	462	10	0.6	1,012	205	1,667
April 24	L. S. Hulburd........	[b]4.30	[b]4.30	[b]4.30	462	10	0.6	948	204	983
June 14	L. E. Moyer.........	[b]4.50	[b]4.50	[b]4.50	462	10	0.6	912	204	668
July 12	L. E. Moyer.........	[b]4.58	[b]4.58	[b]4.58	462	10	0.6	863	204	564

[a] Ice measurement.
[b] Water-surface read below reference point.

Mean Daily Discharge, Second-feet, of Seneca River below Lock No. 6, at Seneca Falls, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	639	*a*	723	1,095	1,247	1,195	845	660	482	857	681	**745**
2	588	*a*	618	1,247	1,247	1,120	903	681	501	880	649	**801**
3	539	*a*	501	1,095	1,234	1,208	961	578	681	845	588	**745**
4	539	539	588	1,095	1,195	1,286	639	569	618	880	618	**790**
5	639	*a*	681	1,195	1,183	1,195	915	639	559	745	618	**756**
6	588	1,221	702	1,145	1,221	1,208	834	639	520	713	681	**1,195**
7	639	745	790	1,273	1,221	1,208	767	639	520	734	681	**857**
8	588	857	834	1,070	1,195	1,120	845	767	559	756	845	**745**
9	539	692	812	1,170	1,234	1,095	845	713	598	756	767	**790**
10	639	400	501	1,120	1,170	1,070	857	660	482	......	639	**756**
11	539	639	670	1,299	1,145	1,095	857	608	619	745	649	**801**
12	639	692	778	1,299	1,107	1,046	845	681	*a*	639	639	**723**
13	639	1,221	745	1,247	1,183	997	767	670	549	639	639	**598**
14	639	857	670	*a*	1,170	1,095	723	618	598	745	756	**618**
15	745	756	1,365	1,352	1,145	997	845	734	569	639	745	**660**
16	745	834	891	1,352	1,332	973	745	559	628	702	734	**745**
17	692	*a*	880	1,247	1,378	1,070	790	628	578	734	745	**723**
18	745	*a*	834	1,183	1,299	961	801	608	660	756	713	**745**
19	745	702	790	1,260	1,195	997	767	801	660	723	713	**660**
20	692	1,120	702	1,208	1,378	997	588	670	539	618	713	**618**
21	639	660	324	1,195	1,460	997	598	660	588	801	734	**745**
22	745	660	454	1,273	1,170	973	692	723	539	845	723	**660**
23	639	681	539	1,406	1,273	857	681	692	692	868	745	**681**
24	639	702	767	1,325	1,247	973	702	628	723	845	723	**692**
25	745	702	745	1,273	1,273	903	639	639	598	756	915	......
26	639	756	745	1,247	1,120	961	681	618	723	723	801	**702**
27	745	812	660	1,260	1,221	845	628	608	692	692	812	**660**
28	639	713	745	1,158	1,208	915	559	660	681	745	857	**756**
29	745	598	1,542	1,221	1,338	857	734	639	588	734	845	**639**
30	639	...	598	1,325	1,771	660	628	598	745	734	834	**692**
31	639		790		1,286		618	549	......	660	......	**767**
Mean	652	763	741	1,188	1,254	1,029	752	650	604	750	704	**735**

a No record.

Monthly Discharge of Seneca River below Lock No. 6, at Seneca Falls, N. Y.
[Drainage area, 780 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1912.					
January	745	**539**	652	**0.836**	**0.964**
February	1,221	**400**	763	**0.978**	**1.05**
March	1,542	**324**	741	**0.95**	**1.10**
April	1,406	**1,070**	1,188	**1.52**	**1.70**
May	1,771	**1,107**	1,254	**1.61**	**1.86**
June	1,286	**660**	1,029	**1.32**	**1.47**
July	961	**559**	752	**0.964**	**1.11**
August	801	**549**	650	**0.833**	**0.96**
September	745	**482**	604	**0.774**	**0.864**
October	880	**618**	750	**0.962**	**1.11**
November	915	**588**	704	**0.903**	**1.01**
December	1,195	**598**	**736**	**0.944**	**1.09**

CLYDE RIVER.

DESCRIPTION.

Clyde river joins Seneca river in the Montezuma marsh near the foot of Cayuga lake. Clyde river is formed by the junction of Canandaigua outlet and Ganargua creek, at Lyons. Its total length is about 20 miles and the greater portion of its course lies through a broad, marshy valley. Ganargua creek proper rises near Victor. Its course is northeasterly to Macedon. It then flows easterly, winding broadly through the system of duplicate valleys extending easterly from Macedon. The principal tributary of Ganargua creek is Mud creek, which rises in the hilly region near the head of Canandaigua lake and flows northward about 20 miles, entering Ganargua creek at Victor. Ganargua creek is often called Mud creek throughout its course to Lyons. The valley through which it flows is, however, called Ganargua valley. The tributary drainage is of the characteristic glacial kame type and the tributaries are rather sparse, flowing oftentimes first north and then south between elongated hills, until they find their way to Ganargua creek.

CLYDE RIVER AT CLYDE, N. Y.

A gage was established at Sodus street bridge in the village of Clyde, October 20, 1905, by E. V. R. Payne, of this Department. A gage of the box-and-chain type is used. The scale is divided decimally from zero to 8 feet. The elevation of water-surface, when the gage reads zero, is 380.00. The gage is located on the downstream side of the central span of the bridge. The bridge has a total length between abutments of 174 feet. It is subdivided into 5-foot sections on the downstream side for current-meter measurements, the initial point being the face of the right-hand abutment. Readings are taken each day. It has been impossible to compute the discharge for 1910, 1911 and 1912, owing to the changed channel conditions due to Barge canal construction.

CLYDE RIVER AT LYONS, N. Y.

A gage was established at Geneva street bridge in the village of Lyons, September 25, 1905, by this Department. The gage is of the weight-and-box type and is attached to the downstream side of the bridge on the right-hand span. The gage is divided decimally from zero to 14 feet. The elevation of the water-surface, when the gage reads zero, equals 390.00. Standard chain length, 18.85. Readings are taken at 1 P. M. each day by men from the Barge canal office at Lyons. The gage is located below the inflow of Canandaigua outlet. The downstream side of the bridge is subdivided at 5-foot intervals for current-meter measurements, the initial point being the face of the left-hand abutment.

The current-meter measurements available have enabled a fairly constant rating curve to be prepared for this station. The stream does not freeze over very extensively and the open water rating table has been applied in so far as seemed practicable throughout the year. The stream is more or less obstructed by aquatic vegetation at times in the summer, and the flow during the low-water season as estimated from the regular rating curve is probably less reliable than the calculated discharges for higher stages of the stream.

The bridge has two spans and extends squarely across the stream. The channel of the river is straight in the vicinity of the gage and the current is moderate and nearly uniform at ordinary stages and is confined to the main channel at nearly all stages. The Erie canal runs parallel with the Clyde river both at Clyde and at Lyons and the Clyde river receives some waste water from the canal.

Owing to changed channel conditions, due to Barge canal construction, it has been impossible to compute the discharge at this station for 1911 and 1912.

CANANDAIGUA OUTLET.

DESCRIPTION.

Canandaigua lake occupies one of the elongated depressions extending in nearly a north and south direction in the central lake region of New York. The drainage tributary to the lake is chiefly short lateral streams from the steep slopes of adjacent hillsides. The outflow from the lake is regulated to some extent by gates. The lake is at elevation about 686. From the foot of the lake at Canandaigua the outlet flows a little north to Manchester, a distance of 7 miles. In this distance a fall of 100 feet occurs, which is chiefly concentrated at several water-power dams. From Manchester the stream flows easterly 12 miles and thence northeasterly 8 miles, joining Ganargua creek at Lyons to form the Clyde river. In the easterly portion of its course the stream winds with large bends through a broad sloping valley of fertile land. The fall is mostly utilized at water-power dams. The tributary drainage is moderately rolling and is interspersed with glacial kames. These are lenticular hills extending usually in a north and south direction. At Phelps, Flint creek, which is the largest tributary, enters the outlet. Flint creek drains a valley similar to the adjacent lake basins. This valley is not at present occupied by a lake, but contains an extensive swamp, reaching several miles southward from Gorham.

CANANDAIGUA OUTLET AT ALLOWAY, N. Y.

This gaging station was established September 18, 1906, by F. P. Williams for this Department. It is located at a highway bridge crossing the stream 2½ miles above Lyons. The gage has a vertical scale divided decimally and reading from zero to 10 feet. It is attached to the downstream face of the left-hand abutment of the bridge and has its zero mark at elevation 403.32. Current-meter discharge measurements are made from the downstream side of the bridge, which has a span of 95 feet between abutments.

Current-meter Discharge Measurement of Canandaigua Outlet at Alloway, N. Y.

DATE.	Hydrographer.	GAGE READING.			Meter No.	Lateral interval.	Submergence depth.	Total area.	Total width.	Computed discharge.
		Beginning	Ending	Mean						
						Feet.		Sq. ft.	Feet.	Sec.-ft.
1912. July 9	R. N. Barrett.......	0.90	0.90	0.90	559	5	0.6	202	83	124

Mean Daily Discharge, Second-feet, of Canandaigua Outlet at Alloway, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec
1912.												
1	232	258	946	2,450	708	440	158	183	93	207	158	232
2	207	284	907	2,140	594	360	158	183	232	207	183	258
3	207	310	907	1,825	526	284	158	158	207	183	207	232
4	284	310	788	1,625	468	258	158	114	183	158	183	207
5	310	310	632	1,725	468	258	136	114	158	158	136	183
6	258	310	594	1,525	468	258	114	158	114	158	114	158
7	232	360	670	1,525	468	284	114	232	114	136	136	258
8	207	310	946	1,525	468	310	183	207	114	114	258	360
9	207	310	1,160	1,525	468	310	207	158	114	114	258	360
10	232	310	1,160	1,675	440	284	207	136	114	114	258	360
11	258	284	1,160	1,725	412	258	183	114	114	114	258	360
12	258	258	1,160	1,525	412	258	158	183	114	114	258	526
13	207	258	1,160	1,250	412	258	114	136	114	114	232	559
14	207	258	1,160	1,160	412	258	136	114	114	114	207	386
15	207	284	1,625	1,160	498	258	183	158	136	114	207	360
16	183	310	3,025	1,120	559	258	207	158	158	114	207	360
17	158	310	2,800	1,060	1,060	258	183	158	158	114	207	258
18	158	310	3,150	1,060	788	258	158	207	158	114	207	207
19	158	360	2,575	984	670	232	114	158	158	114	207	284
20	158	670	2,075	907	670	207	114	136	158	114	207	310
21	158	1,250	1,425	907	670	207	158	114	158	114	207	258
22	207	946	1,200	907	670	232	183	114	158	114	183	258
23	232	594	1,200	1,060	670	258	158	114	158	114	158	258
24	284	594	1,160	946	559	232	136	114	207	136	158	258
25	310	594	1,160	907	468	207	114	114	258	183	158	258
26	310	907	1,160	870	468	183	114	114	258	207	183	258
27	310	1,375	1,160	828	468	158	114	136	232	258	207	258
28	310	1,160	1,340	828	468	158	114	158	207	232	207	258
29	284	984	2,190	788	468	158	183	136	207	183	207	258
30	258	......	2,140	747	526	158	232	114	207	158	207	284
31	258	......	1,675	......	526	......	183	114	......	158	......	360
Mean.	234	510	1,433	1,276	546	250	156	145	162	147	199	296

Monthly Discharge of Canandaigua Outlet at Alloway, N. Y.
[Drainage area, 444 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1912.					
January	310	158	234	0.532	0.613
February	1,375	258	510	1.16	1.25
March	3,150	594	1,433	3.26	3.76
April	2,450	747	1,276	2.90	3.24
May	1,060	412	546	1.24	1.43
June	440	158	250	0.568	0.634
July	232	114	156	0.355	0.409
August	232	114	145	0.33	0.38
September	258	93	162	0.368	0.411
October	258	114	147	0.334	0.385
November	258	114	199	0.452	0.504
December	559	158	296	0.673	0.776

IRONDEQUOIT CREEK DRAINAGE BASIN.

DESCRIPTION.

Irondequoit creek is tributary to the Irondequoit bay about six miles east of Rochester. The drainage basin of the stream is shown on the Macedon, Rochester, Honeoye and Canandaigua quadrangles of the United States Geological Survey topographic maps. The head of the stream is in Mendon pond at elevation 662 above tide. The outlet from this pond flows southeasterly, turning to the north before it reaches Fishers village. The stream flows thence in a generally northerly direction, crossing the Erie canal between Pittsford and Bushnell's Basin. At Dispatch, Thomas creek, a large tributary, enters from the east. This tributary receives a considerable amount of waste and overflow waters from the Erie canal, with which it runs parallel for several miles.

The topography of Irondequoit creek drainage basin is generally broken and irregular. The surface soil is, as a rule, very sandy and there are numerous springs and a relatively large supply of ground water, which feeds the stream and maintains a relatively uniform flow. There are a number of undrained depressions in the drainage basin. Most of these do not contain lakes, the surface water-supply being disposed of by evaporation and infiltration. Aside from marshes surrounding Mendon ponds there are several small swamp areas. There are a number of small mills and water-power developments on the stream. A gaging station was maintained on this stream near Pittsford until December 31, 1910, when it was discontinued.

Drainage Areas of Irondequoit Creek.
(From U. S. G. S. Topographic Maps.)

LOCALITY.	AREA IN SQUARE MILES.	
	Place to place.	Total.
Irondequoit creek:		
Head to Mendon	21.89	21.89
Mendon to gaging station	19.77	41.66
Gaging station to Jaeske's mill [a]	7.96	49.62
Jaeske's mill to junction with Thomas creek	13.14	62.76
Thomas creek above mouth	34.15	96.91
Thomas creek to Allen creek	7.81	104.72
Allen creek above mouth	26.56	131.28
Allen creek to lower dam [b]	6.57	137.85
Lower dam to head of bay	13.72	151.57

[a] Erie canal crossing. [b] Two miles below Penfield.

GENESEE RIVER DRAINAGE BASIN.

GENESEE RIVER.

DESCRIPTION.

Genesee river rises in Potter county, Pa., eight or ten miles south of the New York-Pennsylvania boundary, flows northwestward for about thirty-two miles by general course, then turns to the northeast and empties into Lake Ontario, seven miles north of Rochester. The entire length of the stream, following bends, is about 135 miles, and the drainage area is about 2,450 square miles.

In the northern counties the surface is rolling, with long, easy slopes, except along the streams, which usually lie in deep ravines, hemmed in by steep banks. On the whole there is a gradual rise away from the lakes, and in the upper half of the basin the country becomes rough and is broken by ridges, the summits of which attain elevations of from 2,000 to 2,500 feet above tide.

In the thirty-nine miles between Belmont, in central Allegany county, and Portage, in southwestern Livingston county, the fall of the water-surface is 253 feet, an average of 6.4 feet per mile. At Portage the river plunges down in three magnificent falls, and thence nearly to Mount Morris flows at the bottom of a deep gorge. From Mount Morris to Rochester the valley is broad and open and the stream is bordered by meadows subject to occasional overflow. At Rochester there is another abrupt descent over three heavy falls, amounting to about 260 feet within the city.

The series of remarkable lakes tributary to the Oswego basin is continued westward into the basin of the Genesee and includes Conesus, Hemlock, Canadice, and Honeoye lakes. These lakes serve as natural reservoirs and have inlets draining considerable areas at their upper ends. The slopes adjacent to the lakes themselves are narrow and steep and are drained by gullies and torrential brooks. The area below the lakes is rolling and the soil is rich and extensively cultivated. The areas and elevations of these lakes are shown in the following table:

Areas and Elevations of Lakes in Genesee River Basin. [a]

LAKE.	Elevation.	Water-surface area.	Drainage area.	Per cent water-surface.
	Feet.	*Square miles.*	*Square miles.*	
Hemlock lake	896	2.8	46.8	6.12
Canadice lake	1,092	0.7	12.6	5.57
Honeoye lake	800	2.5	39.6	6.41

[a] These lake basins are shown on the Honeoye, Canandaigua, Naples and Wayland topographic atlas sheets of the United States Geological Survey, from which the areas have been taken, with the exception of those for Hemlock and Canadice lakes, which are from surveys of Rochester water works.

Above all the private dams at Rochester the State formerly maintained a dam for diverting water to the Erie canal, and in the basin of Black creek, one of the upper tributaries of the Genesee from the west, are two reservoirs (Rockville and Cuba reservoirs), owned by the State, also used for the benefit of the Erie canal.

Cuba reservoir, on the Genesee-Allegheny divide, receives the drainage from a tributary area of 26.6 square miles. The storage volume is 454,000,000 cubic feet. The overflow from this reservoir enters Allegheny river. The storage water may be turned into the summit level of the abandoned Genesee Valley canal and thence into Genesee river.

Drainage Areas of Tributaries of Genesee River. [a]

NAME OF STREAM.	AREA IN SQUARE MILES.		
	Tributary.	GENESEE RIVER.	
		Above tributary.	Below tributary.
Cryder creek	43.3	99.9	143.2
Chenunda creek	30.0	181.0	210.0
Dyke's creek	68.3	214.0	282.3
Vandermark creek	21.6	301.3	322.9
Knight's creek	22.3	323.9	346.2
Phillips creek	32.3	372.8	405.1
Vancampens creek	55.7	410.4	466.1
Angelica creek	82.1	481.1	563.2
White creek	15.9	569.2	585.1
Black creek	31.1	595.5	626.6
Crawford creek	11.8	637.6	649.4
Caneadea creek	63.3	651.0	714.3
Cold creek	41.0	745.3	786.3
Rush creek	35.3	787.0	822.3
Wiscoye:			
East Coy creek	59.9	....	....
West Coy creek	48.7	833.6	942.2
Wolf creek	19.3	974.9	994.2
Silver Lake outlet	30.4	1,029.2	1,059.6
Coshaqua creek	82.0	1,059.6	1,141.6
Canaseraga creek	258.7	1,148.4	1,407.1
Beards creek	41.3	1,423.1	1,464.4
Conesus Lake outlet	88.8	1,555.5	1,643.9
Honeoye creek	262.6	1,675.9	1,938.5
Allen's creek	198.1	1,947.1	2,145.2
Black creek	211.8	2,168.5	2,380.0
Genesee river, total at mouth	....	....	2,445.6

[a] From an early report on Genesee river storage.

Water-surface Elevation Gages Maintained on Genesee and Niagara Rivers During the Year 1912.

LOCATION.	Date established.	Observer.	Elevation of zero mark (B. C. datum).	Type of gage.	Subdivision of gage.	Readings taken to
Genesee river — Rochester, Elmwood Ave.	Feb. 9, 1904	P. J. Slavin	506.73	Staff	$\frac{1}{10}$ foot.	$\frac{1}{10}$ foot.
Niagara river — Tonawanda	Jan. 23, 1905	Barge canal employee	560.00	Automatic, recording.		
Erie canal — Tonawanda, Deleware Ave.	Jan. 23, 1905	Barge canal employee	560.00	Staff	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Pendleton, Change bridge	Jan. 30, 1905	Jacob Snell, Jr.	560.00	Chain	$\frac{1}{10}$ "	$\frac{1}{100}$ "

GENESEE RIVER AT ELMWOOD AVENUE, ROCHESTER, N. Y.

This station is located at the highway bridge, known locally as Elmwood avenue bridge, at the northern end of South Park, 3½ miles above the center of the city of Rochester, 4¼ miles below the mouth of Black creek (coming in from the left) and 7½ miles above the mouth of the river.

Prior to 1910 a staff gage, bolted to the downstream end of the first pier from the right-hand shore, was read once daily. From December, 1910, to date, mean gage heights have been computed from a Gurley recording gage in the pump-house immediately below the bridge on the right-hand bank. The elevation of the zero of the gage is 506.848, Barge canal datum, and 245.591, Rochester city datum.

The channel consists of smooth gravel and is considered permanent.

Discharge measurements are made from the bridge at which the staff gage is located. Prior to 1904 measurements and elevations of water-surface were taken in conjunction with the water flowing over and around Johnson-Seymour dam in the city of Rochester.

The winter flow is affected by ice for short periods, although as a rule the channel is open.

The discharge rating curve is well developed for all stages and the published data are considered good for periods of open water.

This station was maintained by the United States Geological Survey in coöperation with the New York State Barge Canal and the engineering department of the city of Rochester from 1904 to 1909; from December, 1909, it was maintained in coöperation with the New York State Conservation Commission and the engineering department of the city of Rochester.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Genesee River at Elmwood Ave., Rochester, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	508.73	508.73	510.43	516.23	511.93	508.53	507.83	507.73	507.73	508.13	507.93	508.13
2.....	508.73	508.73	509.93	516.73	510.43	508.63	507.83	507.73	508.13	508.33	507.83	508.23
3.....	508.73	508.63	509.53	516.73	509.83	508.53	507.83	507.73	508.73	508.93	507.73	508.33
4.....	508.43	508.63	509.23	516.23	509.43	508.53	507.83	507.73	508.73	508.43	507.73	510.43
5.....	508.43	508.63	509.23	513.93	509.13	508.63	507.83	507.73	508.53	508.33	507.83	509.43
6.....	508.53	508.53	509.03	514.33	509.03	508.53	507.83	507.73	508.23	508.13	507.93	509.13
7.....	508.53	508.53	508.93	514.73	508.93	508.43	507.83	507.73	508.13	508.03	507.93	510.53
8.....	508.83	508.53	508.93	514.93	508.93	508.43	507.83	507.73	508.03	508.03	508.03	509.73
9.....	508.93	508.53	509.13	514.33	508.93	508.33	507.73	507.73	507.93	507.93	509.43	509.03
10.....	508.93	508.53	509.13	513.13	508.73	508.33	507.73	507.73	507.93	507.83	509.23	508.53
11.....	508.73	508.53	509.33	511.93	508.73	508.23	507.73	507.73	507.93	507.93	509.23	508.63
12.....	508.63	508.53	509.53	511.13	508.63	508.23	507.93	507.63	507.83	508.03	508.93	509.33
13.....	508.63	508.43	509.43	511.43	508.63	508.23	507.93	507.63	507.73	508.23	508.73	509.23
14.....	508.63	508.43	509.43	511.43	508.63	508.23	507.93	507.63	507.73	508.03	508.53	508.83
15.....	508.43	508.43	509.73	510.93	508.73	508.13	507.93	507.63	507.73	507.93	508.43	508.53
16.....	508.53	508.43	512.83	511.33	508.73	508.13	508.23	507.63	507.73	507.93	508.43	508.33
17.....	508.53	508.43	515.43	510.83	511.03	508.13	507.93	507.63	507.73	507.93	508.33	508.33
18.....	508.53	508.43	513.73	511.23	511.33	508.13	507.83	507.73	508.23	507.73	508.23	508.23
19.....	508.53	508.43	514.13	510.03	510.33	508.13	507.73	507.63	508.23	507.73	508.23	508.33
20.....	508.53	509.33	515.93	509.83	509.63	508.03	507.73	507.73	508.13	507.73	508.23	508.33
21.....	509.63	510.23	515.63	509.53	509.53	508.03	507.73	507.73	508.03	507.63	508.13	508.43
22.....	509.53	509.73	513.63	509.43	509.53	507.93	507.73	507.73	507.93	507.63	508.13	508.33
23.....	509.43	509.33	511.33	509.63	509.53	507.93	507.73	507.73	507.93	507.63	508.13	508.23
24.....	509.33	509.43	510.63	509.93	509.33	507.93	507.73	507.73	507.93	507.63	508.03	508.23
25.....	509.23	509.53	510.03	509.83	509.03	507.93	507.73	507.73	507.93	508.63	508.03	508.13
26.....	509.13	509.83	509.63	509.43	508.73	507.93	507.73	507.73	508.33	508.73	508.13	508.13
27.....	508.93	510.23	509.63	509.73	508.63	507.93	507.73	507.73	508.53	508.83	508.03	508.13
28.....	508.83	510.53	510.83	509.03	508.63	507.93	507.73	507.73	507.93	508.63	508.23	508.13
29.....	508.93	510.73	512.83	508.93	508.53	507.83	507.73	508.13	507.93	508.23	508.13	508.03
30.....	508.83	......	515.13	511.83	508.53	507.83	507.83	507.93	508.23	508.13	508.13	508.03
31.....	508.83	......	515.83	......	508.53	......	507.83	507.93	......	508.03	......	508.13

Current-meter Discharge Measurements of Genesee River at Elmwood Ave., Rochester, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Computed discharge.
1912.			*Sec.-ft.*
Feb. 18 *a*....	C. S. DeGolyer..	1.76	342
Mar. 15 *b*....	G. H. Canfield..	3.10	1,830

a Measurements made under complete ice cover, about 1,500 feet above bridge.
b Measurements made under complete ice cover, about 1,000 feet below gage.

Mean Daily Discharge, Second-feet, of Genesee River at Elmwood Ave., Rochester, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	1,850	740	3,110	22,800	9,900	1,240	354	354	396	782	102	743
2.....	1,760	640	2,250	24,700	5,800	1,270	380	346	320	1,640	414	743
3.....	1,650	580	1,610	25,400	3,940	916	362	337	1,040	1,870	320	1,210
4.....	1,660	520	1,200	24,000	3,100	588	362	346	1,760	1,210	320	5,130
5.....	1,440	500	958	19,200	2,480	888	380	328	1,390	902	178	3,480
6.....	1,400	460	812	16,400	2,180	1,380	380	362	958	743	118	2,430
7.....	1,400	420	730	17,800	2,100	1,220	371	337	730	646	345	4,470
8.....	1,500	360	730	18,500	2,140	1,120	354	337	634	610	944	3,940
9.....	1,600	360	834	18,200	1,980	1,080	306	320	555	544	3,020	2,410
10.....	1,840	360	934	13,900	1,760	972	306	313	490	490	2,620	1,480
11.....	1,660	360	1,100	9,900	1,600	944	462	313	433	490	2,520	1,360
12.....	1,340	334	1,340	7,380	1,480	916	544	297	388	566	1,910	1,690
13.....	1,100	340	1,310	7,100	1,420	888	522	281	345	834	1,520	2,620
14.....	1,080	321	1,250	7,940	1,450	834	481	264	337	694	1,320	2,190
15.....	880	321	2,170	6,580	1,540	743	500	257	337	610	1,220	1,540
16.....	840	334	6,700	6,970	1,580	730	782	250	320	533	1,160	1,150
17.....	780	334	16,100	6,580	4,600	658	566	257	292	452	1,000	1,060
18.....	760	328	13,200	5,080	7,940	658	424	292	285	405	916	986
19.....	700	321	14,800	4,380	5,440	682	354	264	471	362	874	986
20.....	880	720	20,000	3,940	3,720	658	328	271	916	306	808	1,060
21.....	1,170	2,370	21,400	3,400	3,200	566	346	306	782	244	782	1,150
22.....	2,000	1,950	16,800	3,000	3,200	533	337	299	658	264	782	1,020
23.....	2,140	1,260	9,060	3,300	3,100	555	328	337	610	285	706	1,140
24.....	1,960	1,410	5,930	3,940	2,900	490	346	337	511	285	706	795
25.....	1,700	1,460	4,600	3,830	2,190	490	346	320	500	1,300	694	834
26.....	1,500	1,780	3,610	3,300	1,730	481	320	278	490	1,380	682	769
27.....	1,200	2,280	3,300	2,700	1,500	481	299	292	511	1,440	682	743
28.....	1,000	3,110	5,320	2,270	1,270	462	306	337	1,100	1,440	756	756
29.....	920	3,510	11,100	2,030	1,200	396	346	782	1,140	944	730	795
30.....	860	......	17,100	5,440	1,090	354	388	658	821	658	706	634
31.....	780	......	21,000	......	1,100	......	362	490	......	443	......	743

NOTE.—Daily discharge, January 1 to 3 and March 17 to December 31, determined from a fairly well-defined rating curve. Daily discharge, February 10 to March 15, determined from a rating curve based on measurements made under ice conditions. Daily discharge, January 4 to February 9, estimated, assuming that the conditions of flow were changing gradually from open water to complete ice cover. Discharge, March 16, estimated.

Monthly Discharge of Genesee River at Elmwood Ave., Rochester, N. Y.

[Drainage, 2,360 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1912.					
January	*a* 2,300	*a* 700	1,330	0.564	0.65
February	*a* 3,550	*a* 320	958	0.406	0.44
March	22,300	*a* 730	6,790	2.88	3.32
April	25,500	2,000	10,000	4.24	4.73
May	11,000	1,060	2,860	1.21	1.40
June	1,480	320	773	0.328	0.37
July	902	271	395	0.167	0.19
August	860	238	341	0.144	0.17
September	1,890	257	651	0.276	0.31
October	2,370	232	754	0.319	0.37
November	3,260	....	962	0.408	0.46
December	5,580	610	1,610	0.682	0.79

a Discharge from ice rating.

GENESEE RIVER AT JONES BRIDGE, NEAR MT. MORRIS, N. Y.

This gaging station is at the highway bridge known as Jones bridge, crossing the Genesee river a short distance below the mouth of Canaseraga creek. It is located about 5 miles downstream from Mt. Morris. The station was established May 22, 1903, by Robert E. Horton and was maintained by the U. S. Geological Survey in coöperation with this Department until April 30, 1906, when it was discontinued. It was reëstablished August 12, 1908, in coöperation with the State Water Supply Commission. The bed of the stream is clay and is smooth and fairly permanent. The stream flows in one channel during low water and overflows the adjacent flood plains at high stages. The current is sluggish in very low water.

Current-meter measurements are made from a foot bridge erected on the outriggers on the downstream side of the bridge. The stream freezes over to some extent in winter and is at times obstructed by needle ice. The results of gagings for the years 1903 to 1906, inclusive, may be found in the State Engineer's report for 1905, pages 645 to 649, inclusive, and in the 1906 supplement, on pages 56 to 59, inclusive. The results here presented have been compiled from the reports of the State Conservation Commission.

Mean Daily Gage Height, in Feet, of Genesee River at Jones Bridge, near Mt. Morris, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	6.40	......	8.80	26.20	11.60	4.95	3.61	3.61	4.30	5.40	4.75	4.90
2	6.30	......	8.60	26.10	8.90	4.75	3.56	3.66	5.80	8.00	4.70	5.10
3	5.90	......	7.30	23.90	7.80	4.85	3.57	3.78	6.70	6.10	4.80	12.20
4	5.80	......	7.00	17.80	7.00	5.00	3.47	3.92	6.20	5.50	4.80	8.60
5	8.10	......	6.80	16.20	6.50	4.75	3.61	3.90	5.40	5.20	4.75	7.10
6	......	......	6.60	22.50	6.30	4.60	4.05	4.05	5.10	5.00	4.60	9.20
7	......	......	6.60	21.80	6.40	4.45	3.61	4.05	4.90	4.90	4.60	9.80
8	......	......	6.70	21.80	6.20	4.40	3.61	3.82	4.90	4.70	8.40	7.30
9	......	......	7.00	16.00	6.00	4.35	3.48	3.69	4.50	4.65	8.10	6.10
10	......	......	7.60	13.30	5.70	4.20	4.55	3.68	4.25	4.55	8.20	5.60
11	......	......	7.80	10.90	5.60	4.20	4.10	3.54	4.20	5.00	7.00	5.80
12	......	......	7.50	9.90	5.50	4.25	4.40	3.55	4.20	5.50	6.20	5.60
13	......	......	7.40	13.20	5.60	4.15	4.35	3.66	4.25	5.00	5.90	6.40
14	......	......	7.40	10.70	5.90	4.05	4.25	3.49	4.15	4.90	5.70	6.30
15	......	......	8.20	10.50	5.70	4.10	4.10	3.82	3.82	4.70	5.70	6.20
16	......	......	13.80	11.30	6.30	3.95	4.20	3.78	4.15	4.50	5.60	5.50
17	......	......	22.60	10.00	13.40	4.05	4.05	3.69	5.70	4.45	5.40	5.50
18	......	......	24.70	8.60	10.40	4.15	3.88	3.56	5.10	4.40	5.30	5.20
19	......	......	25.00	8.30	8.30	4.05	3.89	3.75	4.95	4.35	5.20	5.40
20	......	......	24.70	7.60	7.30	3.99	3.71	3.79	4.85	4.35	5.10	5.50
21	......	......	18.20	7.00	6.60	3.98	3.60	3.91	4.70	4.30	5.10	5.20
22	......	......	11.00	6.80	6.20	4.00	3.81	4.15	4.40	4.20	5.10	5.20
23	......	......	9.80	6.50	6.40	3.82	3.85	4.01	4.35	4.35	4.90	5.10
24	......	......	8.80	7.80	5.80	3.87	3.88	4.10	4.50	7.10	4.80	5.20
25	......	......	7.60	7.40	5.40	4.10	3.91	3.82	5.20	6.00	4.85	5.00
26	......	......	6.90	6.70	5.20	4.05	3.64	3.95	6.10	6.70	5.00	5.00
27	......	......	7.20	6.30	5.00	3.92	3.71	4.20	5.40	6.00	5.00	5.00
28	......	10.20	8.40	6.00	4.85	3.77	3.81	5.70	5.70	5.50	5.10	4.60
29	......	9.90	20.70	7.10	4.80	3.75	3.82	5.40	5.20	5.20	5.00	4.50
30	......	......	25.80	17.40	4.90	3.71	4.00	4.45	5.00	5.00	4.95	5.00
31	......	......	24.20	......	5.20	......	3.71	4.20	......	4.85	......	6.20

NOTE.— Relation of gage height to discharge was affected by ice, January 5 to March 16.

Current-meter Discharge Measurements of Genesee River at Jones Bridge, near Mt. Morris, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Discharge.
1912.			*Sec.-ft.*
Mar. 13 *a*	G. H. Canfield	7.34	857
July 18 *b*	Frank Weber	3.90	257

a Partly open at bridge; control frozen.
b Made by wading under bridge.

Mean Daily Discharge, Second-feet, of Genesee River at Jones Bridge, near Mt. Morris, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	1,450	......	......	16,500	4,870	687	175	175	402	910	595	664
2	1,400	......	......	16,400	2,980	595	162	188	1,120	2,400	572	760
3	1,180	......	......	14,700	2,270	641	165	222	1,620	1,280	618	5,220
4	1,120	......	......	9,800	1,790	710	141	267	1,340	960	618	2,790
5	......	......	......	8,520	1,500	595	175	260	910	810	595	1,850
6	......	......	......	13,600	1,400	528	311	311	760	710	528	3,190
7	......	......	......	13,000	1,450	463	175	311	664	664	528	3,610
8	......	......	......	13,000	1,340	442	175	234	664	572	2,660	1,970
9	......	......	......	8,360	1,230	422	143	195	484	550	2,460	1,280
10	......	......	......	6,200	1,060	364	506	193	383	506	2,530	1,010
11	......	......	......	4,380	1,010	364	328	158	364	710	1,790	1,120
12	......	......	......	3,680	960	383	442	160	364	960	1,340	1,010
13	......	......	......	6,120	1,010	346	422	188	383	710	1,180	1,450
14	......	......	......	4,240	1,175	311	383	146	346	664	1,060	1,400
15	......	......	......	4,100	1,060	328	328	234	234	572	1,060	1,340
16	......	......	......	4,660	1,400	277	364	222	346	484	1,010	960
17	......	......	13,600	3,750	6,280	311	311	195	1,060	463	910	960
18	......	......	15,300	2,790	4,030	346	254	162	760	442	860	810
19	......	......	15,600	2,600	2,600	311	257	213	687	422	810	910
20	......	......	15,300	2,150	1,970	291	201	225	641	422	760	960
21	......	......	10,100	1,790	1,560	287	172	263	572	402	760	810
22	......	......	4,450	1,670	1,340	294	231	346	442	364	760	810
23	......	......	3,610	1,500	1,450	234	244	294	422	422	664	760
24	......	......	2,920	2,270	1,120	250	254	328	484	1,850	618	810
25	......	......	2,150	2,030	910	328	263	234	810	1,230	641	710
26	......	......	1,730	1,620	810	311	182	277	1,280	1,620	710	710
27	......	......	1,970	1,400	710	267	201	364	910	1,230	710	710
28	......	......	2,660	1,230	641	219	231	1,060	1,060	960	760	528
29	......	......	12,100	1,850	618	213	234	910	810	810	710	484
30	......	......	16,200	9,480	664	201	294	463	710	710	687	710
31	......	......	14,900	......	810	......	201	364	......	641	......	1,340

NOTE.— Daily discharge determined from a well-defined rating curve.

Monthly Discharge of Genesee River at Jones Bridge, near Mt. Morris, N. Y.
[Drainage area, 1,410 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1912.					
January	....	....	780	0.553	0.64
February	....	....	580	0.411	0.44
March	16,200	....	4,500	3.19	3.68
April	16,500	1,230	6,110	4.33	4.83
May	6,280	618	1,680	1.19	1.37
June	710	201	377	0.267	0.30
July	506	141	256	0.182	0.21
August	1,030	146	296	0.21	0.24
September	1,620	234	701	0.497	0.55
October	2,400	364	821	0.582	0.67
November	2,660	528	983	0.697	0.78
December	5,220	484	1,340	0.95	1.10

NOTE.— Discharge, January 5 to March 16, estimated by means of comparison with discharge at Rochester. Mean discharge, January 5 to 31, estimated at 705 second-feet. Mean discharge March 16, estimated at 430 second-feet.

GENESEE RIVER AT ST. HELENA, N. Y.

This gaging station is located at the steel highway bridge crossing Genesee river about 6 miles downstream from the lower falls at Portage and about 5½ miles downstream from Portageville. It was established August 14, 1908, by the U. S. Geological Survey in coöperation with the State Water Supply Commission.

The bed of the stream is coarse gravel and is permanent. Conditions for obtaining current-meter measurements are good and a fairly complete and generally consistent discharge curve is obtained.

The gage is read by Herman Piper, and although the stream is somewhat obstructed by needle ice at times, the general ice conditions are not such as to materially impair the accuracy of results deduced from the open-water rating curve, which is used throughout the year. The results here presented are compiled from the records of the State Conservation Commission.

Mean Daily Gage Height, in Feet, of Genesee River at St. Helena, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug	Sept.	Oct.	Nov.	Dec.
1912.												
1	3.20	3.34	4.50	8.55	4.75	2.56	1.74	1.68	2.20	3.37	2.45	2.53
2	3.00	3.33	4.28	8.13	4.14	2.46	1.79	1.85	3.40	4.00	2.52	2.78
3	2.90	3.32	4.14	6.54	3.82	2.53	1.82	1.88	3.45	3.26	2.61	5.42
4	2.71	3.29	4.05	5.38	3.58	2.72	1.51	1.85	3.05	2.94	2.53	4.20
5	2.50	3.30	3.99	6.30	3.38	2.48	1.79	2.02	2.67	2.78	2.46	3.71
6	2.39	3.31	3.93	7.62	3.34	2.38	1.77	1.95	2.50	2.62	2.39	4.84
7	2.47	3.28	3.89	7.39	3.40	2.33	1.52	1.86	2.54	2.52	2.50	4.42
8	2.80	3.29	3.93	6.80	3.26	2.28	1.85	1.78	2.35	2.42	4.56	3.69
9	2.82	3.28	4.08	5.46	3.12	2.21	1.76	1.76	2.25	2.38	4.03	3.17
10	2.70	3.28	4.48	5.23	3.11	2.20	1.60	1.75	2.16	2.41	4.19	3.05
11	2.74	3.28	4.48	4.67	3.02	2.13	2.01	1.52	2.07	2.83	3.71	3.10
12	2.83	2.50	4.33	4.64	2.85	2.12	2.18	1.70	2.00	2.94	3.39	2.84
13	2.85	2.80	4.27	5.51	3.04	1.99	2.16	1.83	2.07	2.66	3.18	2.55
14	2.85	2.85	4.18	4.77	3.16	2.10	2.03	1.99	1.87	2.58	3.12	2.63
15	2.89	3.00	4.22	4.96	3.07	2.06	2.05	1.87	1.82	2.41	3.08	2.70
16	3.23	2.70	5.92	4.95	3.79	2.04	2.02	1.79	2.41	2.31	2.96	2.77
17	3.42	3.25	6.32	4.37	5.74	2.03	1.84	1.72	3.03	2.26	2.86	2.73
18	3.37	3.31	7.17	4.09	4.56	2.06	1.91	1.56	2.68	2.21	2.83	2.76
19	3.49	3.35	7.11	3.93	3.95	2.04	1.86	1.91	2.58	2.20	2.78	2.94
20	4.41	3.49	7.26	3.78	3.65	2.09	1.75	1.83	2.56	2.16	2.76	3.02
21	4.36	3.67	5.38	3.58	3.42	2.05	1.57	1.84	2.44	2.24	2.74	2.83
22	4.10	4.17	4.39	3.48	3.38	2.00	2.01	1.83	2.29	2.16	2.65	2.70
23	3.98	4.15	4.08	3.87	3.35	1.75	1.82	1.84	2.26	3.05	2.57	2.63
24	3.83	4.20	3.93	3.90	3.03	1.99	1.82	1.83	2.30	3.80	2.52	2.63
25	3.71	4.42	3.60	3.73	2.88	1.97	1.73	1.75	3.03	3.38	2.59	2.60
26	3.61	4.45	3.38	3.44	2.76	1.96	1.85	2.02	3.21	3.59	2.64	2.55
27	3.54	4.72	3.41	3.26	2.67	1.75	2.03	2.48	2.99	3.22	2.66	2.54
28	3.45	4.95	4.20	3.14	2.57	1.75	1.88	2.85	3.04	2.91	2.65	2.40
29	3.40	4.82	7.95	4.50	2.54	1.83	2.03	2.45	2.75	2.74	2.60	2.24
30	3.40	......	8.35	6.50	2.57	1.70	1.91	2.29	2.86	2.60	2.58	2.65
31	3.36	......	7.24	......	2.73	......	1.78	2.18	......	2.50	......	3.51

NOTE.— Relation of gage height to discharge was affected by ice, January 4 to March 16. Since the mouth of the intake pipe to the automatic gage is located a few feet downstream and on the opposite side of the pier from the chain gage, the gage readings do not agree exactly, owing to the slope, and that the slope varies with the stage. These gage heights are obtained from an automatic gage and are the means of hourly readings for 24 hour periods.

Current-meter Discharge Measurements of Genesee River at St. Helena, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Discharge.
1912.			*Second-ft.*
Jan. 4 *a*	C. S. De Golyer	2.72	502
Jan. 4 *a*	C. S. De Golyer	2.58	480
Feb. 17 *b*	C. S. De Golyer	3.29	211
Mar. 10 *b*	G. H. Canfield	4.47	740
Mar. 22	G. H. Canfield	4.38	2,470
Mar. 22	G. H. Canfield	4.31	2,440
June 16 *c*	Frank Weber	2.01	196
Oct. 25	C. S. De Golyer	3.24	954
Oct. 25	C. S. De Golyer	3.40	1,130
Oct. 29 *c*	C. S. De Golyer	2.77	552

a In morning; some slush ice and ice near shore.
b Measurement made under complete ice cover.
c Measurement made by wading.

Mean Daily Discharge, Second-feet, from Automatic Gage of Genesee River at St. Helena, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	1,070	340	785	17,100	3,240	432	116	101	265	1,100	374	416
2	881	320	644	14,900	2,150	379	129	146	1,130	1,940	410	562
3	789	300	570	8,160	1,680	416	137	154	1,190	980	458	4,780
4	628	280	526	4,680	1,360	522	64	151	775	681	416	2,250
5	536	280	498	7,360	1,110	390	129	199	492	562	374	1,520
6	398	280	473	12,400	1,060	341	124	175	400	464	345	3,420
7	400	240	456	11,300	1,130	319	66	148	421	410	400	2,620
8	610	240	473	9,040	989	298	146	127	327	360	2,870	1,500
9	600	240	540	4,630	840	269	121	121	285	341	1,980	890
10	470	240	772	4,430	830	265	82	119	249	355	2,230	775
11	470	240	772	3,080	748	238	196	66	216	598	1,520	820
12	500	240	674	3,030	620	234	257	106	192	681	1,120	605
13	480	240	638	5,100	766	189	249	140	216	486	900	426
14	460	230	590	3,280	880	227	213	189	151	432	840	469
15	460	230	611	3,680	793	213	210	151	137	355	802	510
16	670	230	3,000	3,660	1,640	206	193	129	355	310	697	555
17	770	231	7,430	2,530	5,650	224	139	111	784	289	620	529
18	500	247	10,400	2,080	2,870	213	163	74	498	269	598	548
19	750	259	10,200	1,920	1,860	206	148	163	442	265	562	681
20	1,450	301	10,800	1,620	1,440	192	119	140	432	249	548	748
21	1,360	363	4,680	1,360	1,150	210	76	143	369	270	535	598
22	1,100	585	2,560	1,230	1,110	192	196	140	302	241	481	510
23	960	575	2,060	1,750	1,080	119	137	143	289	700	437	469
24	910	600	1,840	1,790	784	189	137	140	306	1,480	410	469
25	700	733	1,380	1,550	635	182	114	119	757	1,110	448	453
26	620	752	1,110	1,180	548	179	146	199	930	1,370	475	426
27	550	934	1,140	980	492	119	202	390	722	940	486	421
28	480	1,100	2,250	860	437	119	154	612	766	658	481	350
29	420	1,000	14,000	2,760	421	140	202	374	542	535	453	281
30	400	......	16,000	8,020	437	106	163	302	620	453	442	481
31	360	......	10,700	......	529	......	127	257	......	400	......	1,260

NOTE.— Daily discharge January 1 to 3 and March 17 to December 31, determined from a well-defined rating curve.

Discharge, January 4 to March 16, determined by means of a rating curve based on measurements made under ice conditions, assuming a gradual change from open water to complete ice cover on February 10.

Monthly Discharge of Genesee River at St. Helena, N. Y.
[Drainage area, 1,030 square miles.]

MONTH.	MAXIMUM.						Minimum discharge.	MEAN.		Discharge per square mile.	RUN-OFF.
	AUTOMATIC GAGE.				CHAIN GAGE.						Depth in inches on drainage area.
	Day.	Hour.	Crest gage height.	Crest discharge.	Day.	24-hr. discharge.		Discharge, automatic gage.	Discharge, chain gage.		
1912.				*Sec.-ft.*		*Sec.-ft.*	*Sec.-ft.*	*Sec.-ft.*	*Sec.-ft.*	*Sec.-ft.*	
January..	20	12:45 P. M.	4.76	3,260	....	....	360	669	....	0.65	0.75
February.	23	9:45 P. M.	5.03	3,840	....	....	230	409	....	0.397	0.43
March.....	30	1:00 A. M.	9.51	22,700	29	17,500	456	3,500	....	3.40	3.92
April......	1	4:00 A. M.	9.26	21,200	1-2	15,900	860	4,850	4,700	4.71	5.26
May......	17	3:00 A. M.	6.25	7,200	17	5,720	421	1,270	1,250	1.23	1.42
June......	4	5:30 A. M.	2.83	598	4	530	106	244	248	0.237	0.26
July.......	12	3:30 A. M.	2.18	257	13	263	64	150	143	0.146	0.17
August....	27	5:30 P. M.	3.61	1,390	27	625	66	178	186	0.173	0.20
September.	2	4:30 P. M.	3.94	1,850	2	1,480	137	485	492	0.471	0.53
October....	2	12:30 A. M.	4.53	2,820	2	1,780	241	622	593	0.604	0.70
November.	8	8:30 A. M.	4.78	3,300	8	3,400	345	757	808	0.735	0.82
December..	3	5:45 A. M.	5.95	6,260	3	4,940	281	979	1,030	0.950	1.10
The year...	March 30	1:00 A. M.	9.51	22,700	March 2.	17,500	64	1,180	....	1.15	15.56

CANASERAGA CREEK DRAINAGE BASIN.

DESCRIPTION.

Canaseraga creek, one of the most important tributaries to the Genesee river from the east, rises in the extreme northwestern corner of Steuben county and flows in a northwestern direction to its junction with the Genesee river, a short distance below the village of Mt. Morris.

Through its entire course, the creek flows through a flat, fertile valley, devoted almost entirely to the pursuit of agriculture. From the village of Dansville to Mt. Morris, a distance of 22½ miles, the river winds back and forth across the valley. The velocity is so slow that the large amount of silt which is brought down from the foot hills by the smaller streams is deposited in the creek bed, raising it to an elevation higher, in many cases, than the surrounding country. The deposit of silt, coupled with the extreme deviation of the creek from a straight line, causes the 11,000 acres, which border on the stream below Dansville, to become annually inundated by the flood waters.

CANASERAGA CREEK NEAR DANSVILLE, N. Y.

This station is located at the highway bridge one mile due west from the village of Dansville and about 22 miles above the mouth of the stream.

It was established July 21, 1910, by the New York State Water Supply Commission, in coöperation with the U. S. Geological Survey, to obtain data in regard to the flow of this stream and to aid in a general way the studies being made of the flow of the Genesee river.

The data here presented have been compiled from the reports of the State Conservation Commission.

A staff gage is bolted to the downstream, left-hand wing wall and is read twice daily. Low-water measurements are made by wading below the bridge and high-water measurements will be made from the bridge. The bed of the stream at this point is composed of sand and gravel and may shift during high water.

Mean Daily Gage Height, in Feet, of Canaseraga Creek near Dansville, N. Y.

DAY.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1910.						
1	......	1.75	1.82	1.75	1.78	1.92
2	......	1.75	1.75	1.70	1.80	1.98
3	......	1.78	1.88	1.70	1.75	2.08
4	......	1.78	1.80	1.68	1.80	2.02
5	......	1.75	1.75	1.68	1.80	2.00
6	......	1.75	1.85	1.75	1.80	1.92
7	......	1.78	1.78	1.95	1.78	1.90
8	......	1.75	1.75	1.78	1.78	1.82
9	......	1.75	1.78	1.75	1.90	1.88
10	......	1.92	1.75	1.75	2.02	1.85
11	......	1.82	1.72	1.72	2.15	......
12	......	1.75	1.72	1.75	1.92	......
13	......	1.75	1.72	1.72	1.80	......
14	......	1.75	1.75	1.70	1.82	......
15	......	1.72	1.72	1.72	1.80	......
16	......	1.72	1.72	1.70	1.85	......
17	......	1.75	1.75	1.72	1.82	......
18	......	1.78	1.75	1.72	1.82	......
19	......	1.85	1.78	1.68	1.92	......
20	......	1.78	1.75	1.68	1.88	......
21	1.75	1.75	1.72	1.72	1.82	......
22	1.72	1.75	1.72	1.75	1.80	......
23	1.75	1.72	1.72	1.72	1.85	......
24	1.78	1.70	1.85	1.75	1.80	......
25	1.75	1.72	1.78	1.88	2.08	......
26	1.75	1.82	1.75	1.82	2.02	......
27	1.75	1.75	1.75	1.82	1.95	......
28	1.80	1.75	1.72	1.80	2.05	......
29	1.75	1.72	1.72	1.82	2.00	......
30	1.85	1.72	1.75	1.80	1.92	......
31	1.75	1.72	......	1.82	......	......

Mean Daily Gage Height, in Feet, of Canaseraga Creek near Dansville, N. Y.

DAY.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1911.											
1	......	3.20	2.18	2.32	2.18	1.80	1.60	2.22	2.06	2.09	2.24
2	......	3.20	2.05	2.55	2.18	1.78	1.60	1.95	2.20	2.06	2.19
3	......	2.95	2.10	2.42	2.05	1.75	1.62	1.94	1.99	2.03	2.22
4	......	2.78	2.12	2.32	1.98	1.70	1.82	1.81	2.06	1.92	2.24
5	......	2.88	3.08	2.28	2.10	1.62	1.78	1.98	2.03	1.99	2.12
6	......	2.80	3.05	2.20	2.08	1.68	1.70	1.98	1.92	2.01	2.16
7	......	2.55	3.85	2.12	1.98	1.70	1.68	1.84	2.89	2.18	2.19
8	......	2.58	3.40	2.15	2.02	1.68	1.72	2.24	2.74	2.02	2.24
9	......	2.78	2.92	2.12	1.92	1.72	1.68	2.06	2.74	2.29	2.18
10	......	3.15	2.82	2.02	1.90	1.70	1.60	1.89	2.51	2.16	2.32
11	......	3.40	2.72	2.02	2.05	1.72	1.68	1.81	2.24	2.08	2.24
12	......	3.65	2.52	1.98	2.20	1.70	1.60	1.88	2.26	2.19	2.36
13	......	3.90	2.45	1.92	2.28	1.72	1.62	1.94	2.12	2.20	3.20
14	......	4.20	2.60	1.92	2.18	1.70	1.60	1.84	2.04	2.18	2.95
15	......	4.20	2.48	1.90	2.05	1.65	1.80	1.81	2.04	2.26	2.69
16	......	3.45	2.32	1.82	1.95	1.70	2.10	1.82	1.96	2.18	2.95
17	2.33	3.15	2.45	2.02	1.88	2.05	1.88	1.82	1.92	2.29	2.91
18	3.40	3.30	2.40	2.05	......	1.95	1.98	1.80	2.04	2.91	2.69
19	3.60	3.20	2.30	1.92	1.82	1.82	1.88	1.88	1.94	2.59	2.64
20	3.40	3.05	2.48	1.92	1.80	1.98	1.72	1.86	1.88	2.50	2.29
21	3.05	2.78	2.40	1.95	1.82	1.80	1.70	1.79	1.89	2.31	2.11
22	2.82	2.78	2.45	1.92	1.88	1.78	1.72	1.78	1.96	2.24	2.20
23	2.35	2.75	2.62	1.95	1.82	1.75	1.72	1.81	2.01	2.18	2.59
24	2.08	2.48	2.48	2.05	1.80	1.72	1.80	1.85	1.92	2.25	2.62
25	2.45	2.88	2.32	2.18	1.82	1.70	2.02	1.84	1.94	2.21	2.49
26	2.94	2.95	2.22	2.08	1.80	1.68	1.88	1.91	1.88	2.19	2.39
27	3.40	4.15	2.12	1.98	1.88	1.65	1.72	1.82	1.99	2.18	2.81
28	3.35	3.80	2.02	1.95	2.02	1.62	2.45	1.84	1.96	2.14	2.58
29	......	2.82	1.90	1.82	1.92	1.62	2.50	1.92	1.92	2.39	2.41
30	......	2.58	1.88	1.80	1.80	1.62	2.22	1.96	1.95	2.26	2.44
31	......	2.35	......	1.95	......	1.60	2.20	......	2.14	......	2.75

NOTE.— No information regarding ice effect.
There may have been some effect during February and March.

Mean Daily Gage Height, in Feet, of Canaseraga Creek near Dansville, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	2.69	......	......	4.20	3.20	2.72	2.22	2.12	2.38	2.40	2.22	2.32
2	2.54	......	......	4.50	3.05	2.72	2.22	2.18	3.18	2.22	2.18	2.30
3	2.34	......	......	3.30	2.98	2.82	2.25	2.28	2.92	2.20	2.22	2.40
4	......	......	......	3.10	2.88	2.72	2.20	2.32	2.48	2.15	2.18	2.70
5	......	......	......	4.00	2.72	2.72	2.22	2.22	2.22	2.18	2.20	2.62
6	......	......	......	4.15	2.62	2.75	2.32	2.32	2.16	2.15	2.18	2.72
7	......	......	......	4.10	2.72	2.60	2.30	2.22	2.12	2.18	2.62	2.55
8	......	......	......	3.30	2.78	2.48	2.22	2.13	2.10	2.18	2.82	2.32
9	......	......	......	3.20	2.55	2.42	4.20	2.12	2.13	2.18	2.62	2.28
10	......	......	......	3.05	2.45	2.35	3.55	2.12	2.12	2.22	2.48	2.30
11	......	......	......	2.98	2.50	2.32	3.20	2.10	2.12	2.15	2.32	2.32
12	......	......	......	2.98	2.58	2.32	3.20	2.14	2.15	2.18	2.32	2.32
13	......	......	2.15	2.88	2.70	2.32	2.90	2.08	2.12	2.15	2.28	2.30
14	......	......	1.92	3.00	2.52	2.28	3.30	2.02	2.18	2.12	2.32	2.58
15	......	......	3.65	3.30	2.48	2.22	2.72	2.02	2.22	2.08	2.28	2.35
16	......	......	3.80	3.10	3.40	2.28	2.52	2.00	2.30	2.05	2.25	2.42
17	......	......	3.90	2.92	3.35	2.28	2.38	2.08	2.18	2.10	2.32	2.42
18	......	......	4.10	3.10	3.30	2.22	2.32	2.28	2.40	2.08	2.30	2.55
19	......	......	3.85	2.82	3.20	2.20	2.20	2.22	2.22	2.08	2.25	2.50
20	......	......	3.70	2.20	3.10	2.22	2.20	2.30	2.22	2.10	2.25	2.48
21	......	......	3.20	1.95	2.95	2.22	2.30	2.22	2.18	2.05	2.22	2.42
22	......	......	2.92	2.22	2.82	2.28	2.22	2.22	2.18	2.08	2.25	2.42
23	......	......	2.65	2.30	2.82	2.22	2.18	2.58	2.15	2.42	2.22	2.42
24	......	......	2.55	2.01	2.78	2.22	2.15	2.45	2.55	2.48	2.32	2.42
25	......	......	2.65	1.90	2.70	2.18	2.12	2.22	2.58	2.38	2.35	2.40
26	......	......	2.65	1.82	2.72	2.20	2.38	2.28	2.30	2.38	2.32	2.45
27	......	......	3.05	1.78	2.75	2.22	2.18	2.28	2.18	2.38	2.30	2.58
28	......	......	3.52	1.72	2.70	2.20	2.12	2.22	2.15	2.30	2.28	2.48
29	......	......	5.20	2.30	2.72	2.25	2.10	2.20	2.28	2.28	2.25	2.65
30	......	......	3.95	3.40	2.65	2.22	2.13	2.18	2.78	2.28	2.28	2.98
31	......	......	3.70	......	2.65	......	2.10	2.12	......	2.25	......	2.92

NOTE.— No information regarding ice effect.
There may have been some effect during March.

Current-meter Discharge Measurements of Canaseraga Creek at Dansville, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Discharge.
1912.			*Sec.-ft.*
Mar. 12 *a*	G. H. Canfield	2.61	97.3
Mar. 17	G. H. Canfield	4.21	1,500.0
Mar. 18	G. H. Canfield	3.58	984.0
Mar. 23	G. H. Canfield	2.67	263.0
Mar. 24	G. H. Canfield	2.53	200.0
April 4	G. K. Lorrison	3.05	409.0
April 6	G. K. Lorrison	3.82	1,118.0
July 19 *b*	Frank Weber	2.13	33.4
Sept. 23 *c*	J. G. Mathers	2.09	29.2
Sept. 23 *c*	J. G. Mathers	2.10	31.0
Oct. 26 *c*	C. S. De Golyer	2.37	75.3
Oct. 26 *c*	C. S. De Golyer	2.37	73.5
Oct. 28 *c*	C. S. De Golyer	2.27	50.9

a Made one-quarter mile below station. Ice at control.
b Made by wading above bridge.
c Made by wading below gage.

Mean Daily Discharge, Second-feet, of Canaseraga Creek near Dansville, N. Y.

DAY.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1910.						
1	......	25	33	25	28	49
2	......	25	25	20	30	61
3	......	28	42	20	25	81
4	......	28	30	18	30	69
5	......	25	25	18	30	65
6	......	25	38	25	30	49
7	......	28	28	55	28	45
8	......	25	25	28	28	33
9	......	25	28	25	45	42
10	......	49	25	25	69	38
11	......	33	22	22	98	......
12	......	25	22	25	49	......
13	......	25	22	22	30	......
14	......	25	25	20	33	......
15	......	22	22	22	30	......
16	......	22	22	20	38	......
17	......	25	25	22	33	......
18	......	28	25	22	33	......
19	......	38	28	18	49	......
20	......	28	25	18	42	......
21	25	25	22	22	33	......
22	22	25	22	25	30	......
23	25	22	22	22	38	......
24	28	20	38	25	30	......
25	25	22	28	42	81	......
26	25	33	25	33	69	......
27	25	25	25	33	55	......
28	30	25	22	30	75	......
29	25	22	22	33	65	......
30	38	22	25	30	49	......
31	25	22	......	33	......	......

NOTE.— Daily discharge determined from a poorly-defined rating curve.

Mean Daily Discharge, Second-feet, of Canaseraga Creek near Dansville, N. Y.

DAY.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1911.											
1	......	550	105	140	105	30	10	115	77	83	120
2	......	550	75	208	105	28	10	55	110	77	108
3	......	390	85	166	75	25	12	53	63	71	115
4	......	301	90	140	61	20	33	32	77	49	120
5	......	350	468	130	85	12	28	61	71	63	90
6	......	310	450	110	81	18	20	61	49	67	100
7	......	208	1,140	90	61	20	18	36	355	105	108
8	......	218	700	98	69	18	22	120	283	69	120
9	......	301	372	90	49	22	18	77	283	132	105
10	......	515	320	69	45	20	10	44	194	100	140
11	......	700	274	69	75	22	18	32	120	81	120
12	......	930	197	61	110	20	10	42	125	108	150
13	......	1,190	175	49	130	22	12	53	90	110	550
14	......	1,520	225	49	105	20	10	36	73	105	390
15	......	1,520	184	45	75	15	30	32	73	125	261
16	......	745	140	33	55	20	85	33	57	105	390
17	142	515	175	69	42	75	42	33	49	132	366
18	700	620	160	75	38	55	61	30	73	366	261
19	880	620	135	49	33	33	42	42	53	222	241
20	700	450	184	49	30	61	22	39	42	190	132
21	450	301	160	55	33	30	20	29	44	138	88
22	320	301	175	49	42	28	22	28	57	120	110
23	148	288	233	55	33	25	22	32	67	105	222
24	81	184	184	75	30	22	30	38	49	122	233
25	175	350	140	105	33	20	69	36	53	112	187
26	384	390	115	81	30	18	42	47	42	108	158
27	700	1,460	90	61	42	15	22	33	61	105	315
28	660	1,080	69	55	69	12	175	36	57	95	218
29	......	320	45	33	49	12	190	49	49	158	163
30	......	218	42	30	30	12	115	57	55	125	172
31	......	148	......	45	......	10	110	......	93	......	288

NOTE.— Daily discharge determined from a poorly-defined rating curve. Discharge for June 18 interpolated.

Mean Daily Discharge, Second-feet, of Canaseraga Creek near Dansville, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	261	......	......	1,520	480	200	50	34	84	89	50	71
2	204	......	......	1,880	380	200	50	43	466	50	43	66
3	145	......	......	620	338	250	56	62	302	46	50	89
4	......	......	......	480	280	200	46	71	110	38	43	190
5	......	......	......	1,290	200	200	50	50	50	43	46	158
6	......	......	......	1,460	158	215	71	71	40	38	43	200
7	......	......	......	1,400	200	150	66	50	34	43	158	132
8	......	......	......	560	230	110	50	36	31	43	250	71
9	......	......	......	480	132	94	1,520	34	36	43	158	62
10	......	......	......	380	102	78	800	34	34	50	110	66
11	......	......	......	338	115	71	480	31	34	38	71	71
12	......	......	......	338	143	71	480	37	38	43	71	71
13	......	......	98	280	190	71	290	28	34	38	62	66
14	......	......	49	350	122	62	560	21	43	34	71	84
15	......	......	930	560	110	50	200	21	50	28	62	78
16	......	......	1,080	410	650	62	122	18	66	24	56	94
17	......	......	1,190	302	605	62	84	28	43	31	71	94
18	......	......	1,410	410	560	50	71	62	89	28	66	132
19	......	......	1,140	250	480	46	46	50	50	28	56	115
20	......	......	980	46	410	50	46	66	50	31	56	110
21	......	......	550	14	320	50	66	50	43	24	50	94
22	......	......	372	50	250	62	50	50	43	28	56	94
23	......	......	245	66	250	50	43	143	38	94	50	94
24	......	......	208	19	230	50	38	102	132	10	71	94
25	......	......	245	10	190	43	34	50	143	84	78	89
26	......	......	245	6	200	46	84	62	66	84	71	102
27	......	......	450	4	215	50	43	62	43	84	66	143
28	......	......	808	3	190	46	34	50	38	66	62	110
29	......	......	2,820	66	200	56	31	46	62	62	56	170
30	......	......	1,240	650	170	50	36	43	230	62	62	338
31	......	......	980	......	170	......	31	34	......	56	......	302

NOTE.—Daily discharge, January 1 to 3 and March 13 to April 3, determined from a poorly-defined rating curve.

Monthly Discharge of Canaseraga Creek near Dansville, N. Y.
[Drainage area, 167 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1910.					
July—(21-31)	38	22	26 6	....	....
August	49	20	26.4	0.158	0.18
September	42	22	26.3	0.157	0.18
October	55	18	25 7	0.154	0.18
November	98	25	43.4	0.260	0.29
1911.					
February	880	81	445.0	2.66	1.19
March	1,520	148	566.0	3.39	3.90
April	1,140	42	230.0	1.38	1.54
May	208	30	78 5	0.47	0.54
June	130	30	60.7	0.363	0.405
July	75	10	24.5	0.147	0.17
August	190	10	42.9	0.257	0.30
September	120	28	47.0	0 281	0.31
October	355	42	95.0	0.569	0.66
November	366	49	118.0	0.707	0.79
December	550	88	198.0	1 189	1.37
1912.					
March	2,820	49	529.0	3.17	3.66
April	1,880	3	475.0	2.84	3.17
May	650	102	267.0	1.60	1.84
June	250	43	93.2	0.558	0.62
July	1,520	31	182.0	1.090	1.26
August	143	18	49.6	0.297	0.34
September	406	31	84.1	0.504	0.56
October	110	24	50.3	0.301	0.35
November	250	43	73.8	0.442	0.49
December	338	62	118.0	0.707	0.82

Mean discharge, March 1 to 12, 1912, estimated at 1,110 sec.-ft. by means of comparison with adjacent stations.

KESHEQUA CREEK DRAINAGE BASIN.

DESCRIPTION.

Keshequa creek, principal tributary to Canaseraga creek, has its source among the hills of northern Allegany county and flows north and northeast through Nunda and Tuscarora joining Canaseraga creek near Sonyea, the home of the Craig Colony for Epileptics. Throughout its length of some 20 miles it flows through a narrow valley and falls about 1,200 feet. No power is developed, as the flow during the summer averages only 3 to 6 second-feet. The yearly rainfall is a little above the average for the Genesee valley and ranges from 28 to 36 inches.

KESHEQUA CREEK AT SONYEA, N. Y.

This station is located at the upper highway bridge in the village and about two miles above the mouth of the stream. It was installed to aid in the studies of the flow of Canaseraga creek and to obtain data in regard to the run-off of small drainage areas in the western part of the state.

A staff gage was installed July 22, 1910, by the N. Y. State Water Supply Commission, in coöperation with the U. S. Geological Survey. This gage is fastened to a pile, located on the right-hand bank between the two bridges, directly back and across from the Craig Colony power house. This gage is intended only for the low-water periods of the year, as on October 25 a chain gage was installed on the upstream side of the upper bridge. Discharge measurements are made by wading. Either bridge may be used during high water.

The bed of the creek is composed of gravel and sand and the channel shifts back and forth from year to year. The rating curve is not developed as yet and only gage heights and discharge measurements are published.

The data here presented have been compiled from reports of the State Conservation Commission.

Mean Daily Gage Height, in Feet, of Keshequa Creek at Sonyea, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	3.80	......	5.40	4.80	3.98	3.38	3.00	3.0[illegible]	3.30	3.22	3.25	3.45
2	3.65	......	5.30	5.20	3.85	3.35	2.95	3.08	3.52	3.20	3.20	3.50
3	3.60	......	......	4.22	3.75	3.32	2.98	3.22	3.65	3.15	3.25	3.80
4	3.55	......	......	3.68	3.68	3.30	2.95	3.12	3.42	3.12	3.25	3.72
5	3.42	......	......	5.10	3.62	3.30	3.08	3.15	3.20	3.10	3.25	4.20
6	......	......	......	4.70	3.65	3.30	3.18	3.10	3.15	3.05	3.25	4.82
7	......	......	5.30	5.50	3.65	3.28	3.08	3.08	3.08	3.05	3.35	3.92
8	......	......	......	4.90	3.58	3.25	2.98	3.08	3.05	3.10	3.70	3.68
9	......	......	......	4.18	3.58	3.18	2.90	2.98	3.02	3.10	3.85	3.55
10	......	......	......	4.15	3.58	3.15	3.40	3.08	3.00	3.10	3.72	3.55
11	......	......	......	4.00	3.48	3.15	3.55	3.00	3.00	3.18	3.62	3.50
12	......	......	......	4.08	3.42	3.20	3.68	3.10	3.00	3.15	3.38	3.40
13	......	......	5.20	4.15	3.58	3.20	3.32	3.10	2.98	3.20	3.35	3.30
14	......	......	5.20	4.02	3.60	3.18	3.52	3.10	2.95	3.18	3.35	3.20
15	......	......	6.00	4.18	3.60	3.15	3.32	3.05	3.22	3.15	3.35	3.20
16	......	......	6.10	4.05	4.18	3.05	3.20	2.98	3.55	3.10	3.32	3.22
17	......	......	5.70	3.90	4.25	3.08	3.18	2.98	3.48	3.20	3.30	3.25
18	......	......	5.00	3.90	3.90	3.12	3.10	3.08	3.38	3.20	3.30	3.25
19	4.70	......	4.90	3.88	3.72	3.10	3.02	3.10	3.22	3.18	3.30	3.30
20	4.65	5.00	4.70	3.85	3.70	3.12	3.05	3.05	3.10	3.20	3.30	3.40
21	4.55	4.80	3.80	3.70	3.60	3.10	3.02	3.12	3.05	3.52	3.25	3.35
22	4.55	4.75	3.75	3.78	3.70	3.10	3.02	3.20	3.05	3.48	3.25	3.25
23	......	4.70	3.70	4.00	3.60	3.10	3.08	3.08	3.05	3.62	3.25	3.20
24	......	5.00	3.60	3.85	3.60	3.08	3.00	3.05	3.20	3.72	3.25	3.30
25	......	5.20	3.58	3.80	3.45	3.00	3.05	3.05	3.20	3.45	3.30	3.40
26	......	5.70	3.48	3.70	3.35	3.18	3.25	3.20	3.18	3.35	3.30	3.48
27	......	5.60	4.65	3.65	3.28	3.08	3.15	3.15	3.15	3.30	3.42	3.42
28	......	5.50	4.95	3.60	3.30	3.02	3.00	3.15	3.10	3.28	3.42	3.25
29	......	5.40	6.00	4.20	3.38	3.00	3.00	3.08	3.12	3.20	3.42	3.40
30	......	......	4.65	4.35	3.45	3.00	3.00	3.05	3.18	3.20	3.45	3.40
31	......	......	4.65	......	3.45	......	3.02	3.02	......	......	......	3.35

NOTE.—Relation of gage height to discharge was affected by ice, January 6 to March 17, 1912

Monthly Discharge of Canaseraga Creek near Dansville, N. Y.
[Drainage area, 167 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1910.					
July—(21-31)	38	22	26.6	....	....
August	49	20	26.4	0.158	0.18
September	42	22	26.3	0.157	0.18
October	55	18	25.7	0.154	0.18
November	98	25	43.4	0.260	0.29
1911.					
February	880	81	445.0	2.66	1.19
March	1,520	148	566.0	3.39	3.90
April	1,140	42	230.0	1.38	1.54
May	208	30	78.5	0.47	0.54
June	130	30	60.7	0.363	0.405
July	75	10	24.5	0.147	0.17
August	190	10	42.9	0.257	0.30
September	120	28	47.0	0.281	0.31
October	355	42	95.0	0.569	0.66
November	366	49	118.0	0.707	0.79
December	550	88	198.0	1.189	1.37
1912.					
March	2,820	49	529.0	3.17	3.66
April	1,880	3	475.0	2.84	3.17
May	650	102	267.0	1.60	1.84
June	250	43	93.2	0.558	0.62
July	1,520	31	182.0	1.090	1.26
August	143	18	49.6	0.297	0.34
September	466	31	84.1	0.504	0.56
October	110	24	50.3	0.301	0.35
November	250	43	73.8	0.442	0.49
December	338	62	118.0	0.707	0.82

Mean discharge, March 1 to 12, 1912, estimated at 1,110 sec.-ft. by means of comparison with adjacent stations.

KESHEQUA CREEK DRAINAGE BASIN.

DESCRIPTION.

Keshequa creek, principal tributary to Canaseraga creek, has its source among the hills of northern Allegany county and flows north and northeast through Nunda and Tuscarora joining Canaseraga creek near Sonyea, the home of the Craig Colony for Epileptics. Throughout its length of some 20 miles it flows through a narrow valley and falls about 1,200 feet. No power is developed, as the flow during the summer averages only 3 to 6 second-feet. The yearly rainfall is a little above the average for the Genesee valley and ranges from 28 to 36 inches.

KESHEQUA CREEK AT SONYEA, N. Y.

This station is located at the upper highway bridge in the village and about two miles above the mouth of the stream. It was installed to aid in the studies of the flow of Canaseraga creek and to obtain data in regard to the run-off of small drainage areas in the western part of the state.

A staff gage was installed July 22, 1910, by the N. Y. State Water Supply Commission, in coöperation with the U. S. Geological Survey. This gage is fastened to a pile, located on the right-hand bank between the two bridges, directly back and across from the Craig Colony power house. This gage is intended only for the low-water periods of the year, as on October 25 a chain gage was installed on the upstream side of the upper bridge. Discharge measurements are made by wading. Either bridge may be used during high water.

The bed of the creek is composed of gravel and sand and the channel shifts back and forth from year to year. The rating curve is not developed as yet and only gage heights and discharge measurements are published.

The data here presented have been compiled from reports of the State Conservation Commission.

Mean Daily Gage Height, in Feet, of Keshequa Creek at Sonyea, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	3.80	......	5.40	4.80	3.98	3.38	3.00	3.02	3.30	3.22	3.25	3.45
2	3.65	......	5.30	5.20	3.85	3.35	2.95	3.08	3.52	3.20	3.20	3.50
3	3.60	......	......	4.22	3.75	3.32	2.98	3.22	3.65	3.15	3.25	3.80
4	3.55	......	......	3.68	3.68	3.30	2.95	3.12	3.42	3.12	3.25	3.72
5	3.42	......	......	5.10	3.62	3.30	3.08	3.15	3.20	3.10	3.25	4.20
6	......	......	......	4.70	3.65	3.30	3.18	3.10	3.15	3.05	3.25	4.82
7	......	......	5.30	5.50	3.65	3.28	3.08	3.08	3.08	3.05	3.35	3.92
8	......	......	......	4.90	3.58	3.25	2.98	3.08	3.05	3.10	3.70	3.68
9	......	......	......	4.18	3.58	3.18	2.90	2.98	3.02	3.10	3.85	3.55
10	......	......	......	4.15	3.58	3.15	3.40	3.08	3.00	3.10	3.72	3.55
11	......	......	......	4.00	3.48	3.15	3.55	3.00	3.00	3.18	3.62	3.50
12	......	......	......	4.08	3.42	3.20	3.68	3.10	3.00	3.15	3.38	3.40
13	......	......	5.20	4.15	3.58	3.20	3.32	3.10	2.98	3.20	3.35	3.30
14	......	......	5.20	4.02	3.60	3.18	3.52	3.10	2.95	3.18	3.35	3.20
15	......	......	6.00	4.18	3.60	3.15	3.32	3.05	3.22	3.15	3.35	3.20
16	......	......	6.10	4.05	4.18	3.05	3.20	2.98	3.52	3.10	3.32	3.22
17	......	......	5.70	3.90	4.25	3.08	3.18	2.98	3.48	3.20	3.30	3.25
18	......	......	5.00	3.90	3.90	3.12	3.10	3.08	3.38	3.20	3.30	3.25
19	4.70	......	4.90	3.88	3.72	3.10	3.02	3.10	3.22	3.18	3.30	3.30
20	4.65	5.00	4.70	3.85	3.70	3.12	3.05	3.05	3.10	3.20	3.30	3.40
21	4.55	4.80	3.80	3.70	3.60	3.10	3.02	3.12	3.05	3.52	3.25	3.35
22	4.55	4.75	3.75	3.78	3.70	3.10	3.02	3.20	3.05	3.48	3.25	3.25
23	......	4.70	3.70	4.00	3.60	3.10	3.08	3.08	3.05	3.62	3.25	3.20
24	......	5.00	3.60	3.85	3.60	3.08	3.00	3.05	3.20	3.72	3.25	3.30
25	......	5.20	3.58	3.80	3.45	3.00	3.05	3.05	3.20	3.45	3.30	3.40
26	......	5.70	3.48	3.70	3.35	3.18	3.25	3.20	3.18	3.35	3.30	3.48
27	......	5.60	4.65	3.65	3.28	3.08	3.15	3.15	3.15	3.30	3.42	3.42
28	......	5.50	4.95	3.60	3.30	3.02	3.00	3.15	3.10	3.28	3.42	3.25
29	......	5.40	6.00	4.20	3.38	3.00	3.00	3.08	3.12	3.20	3.42	3.40
30	......	......	4.65	4.35	3.45	3.00	3.00	3.05	3.18	3.20	3.45	3.40
31	......	......	4.65	......	3.45	......	3.02	3.02	......	......	......	3.35

NOTE.— Relation of gage height to discharge was affected by ice, January 6 to March 17, 1912

Monthly Discharge of Keshequa Creek at Sonyea, N. Y.
[Drainage area, 67 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1912.					
March	....	....	237	3.060	3.53
April	950	29	224	3.340	3.73
May	178	10	40.9	0.610	0.70
June	15	3	7.1	0.106	0.12
July	38	2	7.5	0.112	0.13
August	9	3	4.9	0.073	0.08
September	34	3	8.9	0.133	0.15
October	43	4	10.4	0.155	0.18
November	65	8	16.5	0.246	0.27
December	426	8	37.5	0.560	0.65

CANADICE LAKE.

DESCRIPTION.

Canadice lake is tributary to Genesee river through Hemlock lake outlet and Honeoye creek. The area drained by the lake forms an irregular rectangle, the lake lying somewhat to the left of the longitudinal axis and the greater portion of the drainage being on the eastern slope. The western slope is narrow and precipitious. Bald Hill rises from an altitude of 1,090 feet at the lake to 1,800 feet at the summit and has its axis parallel to the lake at an average distance of three-fourths of a mile from it. The lake has a water-surface area of 0.7 square mile and drains a total area of 12.6 square miles, 5.6 per cent of which is lake surface.

CANADICE LAKE OUTLET NEAR HEMLOCK, N. Y.

A weir was constructed at the outlet at the foot of the lake by the city engineer's department of Rochester, N. Y., in February, 1903. The entire yield of the drainage basin passes this weir.

A standard thin-edged weir with a five-foot crest and two end contractions is so arranged with needle-timbers at the ends that during high water the length may be increased to 14.96 feet with no end contractions. The weir crest stands three feet above the stream channel and is never submerged by backwater. There are two additional rectangular gates each one foot square, with three complete contractions and a fourth partial contraction at the bottom. The outflow from the lake above the weir is controlled by gates.

A reading of the depth of the weir is taken each morning, and also for each change of the gates, the depth being read to hundredths and corrections being made for velocity of approach for the larger discharges. The discharge is calculated by the Francis formula. The record has been furnished by E. A. Fisher, city engineer, and John F. Skinner, principal assistant city engineer, of Rochester, N. Y.

Monthly Discharge of Canadice Lake, near Hemlock, N. Y.
[Drainage area, 12.6 square miles.]

MONTH.	Mean elevation of lake above low water.	DISCHARGE IN SECOND-FEET.		RUN-OFF.
		Mean.	Per square mile.	Depth in inches on drainage area.
1912.				
January	1.277	9.188	0.729	0.84
February	0.864	7.843	0.622	0.671
March	1.599	15.738	1.25	1.44
April	2.873	48.252	3.83	4.27
May	2.633	14.462	1.15	1.33
June	2.017	8.892	0.706	0.788
July	1.468	6.984	0.554	0.639
August	0.952	4.697	0.373	0.43
September	0.884	4.598	0.365	0.407
October	0.741	5.030	0.399	0.46
November	0.661	5.947	0.472	0.527
December	1.138	6.617	0.525	0.605
The year	1.430	11.515	0.915	1.03

NOTE.— Investigation and measurement of leakage made during May, 1912, indicate that leakage is occurring through and under the weir, amounting to about 0.6 second-feet.

NIAGARA RIVER DRAINAGE.

GENERAL FEATURES.

Niagara river connects lakes Erie and Ontario. It receives the drainage from Tonawanda creek and adjacent smaller areas in New York.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Erie Canal above State Dam a Tonawanda, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1....	570.20	570.10	570.40	573.20	571.00	570.60	571.20	571.20	*a*	571.10	571.00	*a*
2....	570.30	570.40	570.30	573.70	570.90	*a*	571.30	570.80	571.30	571.00	571.10	570.90
3....	570.30	570.30	*a*	573.30	571.00	570.90	571.40	571.20	571.20	571.00	*a*	570.90
4....	570.30	*a*	570.10	572.90	570.80	570.60	571.30	*a*	571.00	570.90	571.40	571.10
5....	570.30	570.40	570.00	572.20	*a*	570.40	571.30	571.30	571.10	570.90	571.10	570.90
6....	570.40	570.30	569.90	572.10	571.20	570.70	571.10	571.30	571.20	*a*	570.80	570.90
7....	*a*	570.30	569.80	*a*	570.90	570.50	*a*	571.20	571.00	571.20	570.60	571.70
8....	570.40	570.30	569.90	572.80	571.60	570.80	571.00	571.20	*a*	571.00	570.60	*a*
9....	570.40	570.40	569.90	572.50	571.60	*a*	570.70	571.20	571.30	570.80	571.00	570.50
10....	571.00	570.40	*a*	572.10	571.70	571.20	571.20	571.10	571.10	570.70	*a*	570.80
11....	570.00	*a*	570.10	571.50	571.50	571.00	571.20	*a*	571.00	570.60	571.00	570.30
12....	569.90	570.30	570.10	571.20	*a*	571.20	570.70	571.20	570.80	570.60	571.10	570.30
13....	569.40	570.10	570.10	571.30	570.30	571.20	570.60	570.90	570.90	*a*	571.10	570.20
14....	*a*	570.00	570.00	*a*	570.00	570.50	*a*	570.70	570.80	570.60	571.40	569.70
15....	570.00	569.80	570.10	571.80	570.30	570.50	570.50	570.70	*a*	570.60	571.40	*a*
16....	570.00	569.80	569.60	571.20	570.50	*a*	570.70	570.80	571.10	570.00	571.40	570.10
17....	570.00	569.60	*a*	571.20	570.30	570.70	570.40	571.00	571.00	570.20	*a*	569.50
18....	569.80	*a*	572.30	570.90	571.00	570.70	570.30	*a*	570.80	570.60	571.40	569.70
19....	569.80	569.90	573.00	570.90	*a*	570.60	570.50	571.00	571.10	570.90	572.00	570.20
20....	569.80	569.80	573.00	570.80	570.40	570.80	570.50	571.20	571.00	*a*	571.40	570.00
21....	*a*	569.80	572.70	*a*	571.80	570.50	*a*	571.20	570.70	571.00	570.80	569.70
22....	570.80	569.80	572.30	570.50	571.80	570.60	570.80	571.30	*a*	570.40	571.80	*a*
23....	570.40	569.70	572.00	571.00	571.00	*a*	570.50	571.20	571.00	571.00	571.70	569.60
24....	570.20	569.80	*a*	571.40	571.30	571.10	570.30	571.30	570.80	571.50	*a*	569.60
25....	570.00	*a*	571.20	571.50	571.10	571.00	570.70	*a*	570.80	571.50	571.90	569.70
26....	570.10	570.00	570.90	571.20	*a*	570.90	571.20	571.00	571.00	571.20	571.60	569.80
27....	570.30	570.40	571.20	571.10	570.40	570.50	571.30	570.80	571.00	*a*	570.50	569.80
28....	*a*	570.30	571.60	*a*	570.40	570.60	*a*	570.80	570.90	571.60	570.30	570.00
29....	570.20	570.30	572.10	570.70	570.90	571.00	571.30	570 90	*a*	571.40	570.50	*a*
30....	570.40	......	572.00	570.70	570.90	*a*	571.30	570.90	571.20	571.50	570.80	569.50
31....	570.30	......	*a*	......	571.20	......	571.20	570.80	......	571.30	......	570.40

a No record; Sunday.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Erie Canal at Change Bridge, Pendleton, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1....	570.00	570.20	571.00	576.25	570.50	570.70	571.10	571.00	571.05	570.90	570.70	570.80
2....	570.00	570.00	570.90	575.45	571.00	570.60	571.10	570.80	571.00	570.80	570.70	570.80
3....	570.30	570.00	571.00	574.90	571.00	570.60	571.20	570.90	570.70	571.00	570.60	570.90
4....	570.30	569.90	571.10	573.60	570.80	570.50	571.30	571.10	570.70	570.90	570.70	570.90
5....	570.40	570.00	571.20	572.80	570.90	570.30	571.20	571.00	570.65	570.85	570.20	570.80
6....	570.20	569.95	571.25	572.60	570.90	570.20	571.00	571.00	570.50	570.95	570.50	570.80
7....	570.15	569.90	571.30	573.80	571.00	570.10	570.80	570.90	570.50	571.00	570.00	571.45
8....	570.10	569.90	571.40	573.80	571.50	570.50	570.80	570.85	570.80	570.70	570.20	570.90
9....	570.20	569.90	571.40	573.30	571.30	570.80	571.00	570.80	570.70	570.60	570.90	570.80
10....	570.25	569.95	571.10	572.30	571.20	570.80	571.00	570.80	570.60	570.60	570.60	570.70
11....	570.20	569.90	571.05	571.30	571.00	570.70	570.70	571.00	570.60	570.50	570.50	570.20
12....	570.15	569.75	571.00	571.20	570.80	571.00	570.20	570.90	570.60	570.70	570.50	570.20
13....	570.10	569.70	570.90	571.10	570.00	570.80	570.30	570.88	570.70	570.60	570.90	570.20
14....	570.15	569.68	570.90	571.30	569.50	570.20	570.50	570.80	570.70	570.70	570.70	570.15
15....	570.20	569.70	570.95	571.70	569.80	570.30	570.40	570.60	570.55	570.20	571.00	570.10
16....	570.20	569.70	571.00	571.30	570.20	570.50	570.20	570.40	570.55	570.20	571.00	570.00
17....	570.25	569.75	571.40	570.90	571.10	570.70	570.30	570.80	570.60	570.30	571.00	569.40
18....	570.30	569.80	575.10	570.90	571.00	570.65	570.20	571.00	570.70	570.40	571.40	569.70
19....	570.40	570.00	576.50	570.40	570.30	570.50	570.00	571.00	570.70	570.70	571.70	570.40
20....	570.60	570.05	577.25	570.60	570.30	570.60	570.10	571.10	570.60	570.80	571.70	570.50
21....	570.50	570.15	575.00	570.55	571.50	570.50	570.50	571.00	570.20	570.60	571.70	570.20
22....	570.40	570.25	574.10	571.00	571.40	570.60	570.40	571.05	570.50	570.40	571.72	570.10
23....	570.50	570.30	573.00	570.90	570.30	570.60	570.20	571.00	570.60	571.00	571.35	570.00
24....	570.30	570.35	572.50	571.60	571.00	570.90	570.40	571.10	570.30	571.30	571.65	569.90
25....	570.20	570.60	571.50	571.40	570.70	570.90	570.80	571.00	570.40	571.20	571.60	569.80
26....	570.15	571.00	571.40	571.15	570.50	570.60	571.00	570.70	570.80	571.00	571.10	570.00
27....	570.15	571.10	571.50	570.80	570.30	570.00	570.80	570.40	570.75	571.60	571.00	570.00
28....	570.20	571.10	571.90	570.50	570.30	570.20	571.00	570.60	570.70	571.10	571.10	570.00
29....	570.60	571.10	574.10	570.60	570.70	571.00	571.20	570.60	570.80	571.30	571.20	569.90
30....	570.65	......	575.00	570.50	570.80	571.00	571.20	570.10	570.95	571.70	571.80	570.00
31....	570.60	......	576.60	......	570.90	......	571.10	570.30	......	570.70	......	570.20

HUDSON RIVER DRAINAGE BASIN.

DESCRIPTION OF BASIN.

The principal sources of Hudson river lies in the wildest portion of the Adirondack mountains, in Essex county, northeastern New York. A number of branches, any one of which might possibly be considered the main stream, form its upper waters; but if the highest collected and permanent body of water be assumed as the true head, then the source of the Hudson becomes Lake Tear-of-the-Clouds, which lies at an elevation of 4,322 feet above tide, in the center of the triangle formed by Mounts Marcy and Skylight and Gray Peak.

The river flows rather irregularly southward until it reaches the northern boundary of Saratoga county, when it makes a sharp turn and flows eastward for about 12 miles by general course, passing through the mountains and forming, as it cuts across the rocky strata, several notable waterfalls. At Sandy Hill, just below Glens Falls, it makes another abrupt turn and flows southward, continuing in this direction until it empties into New York bay.

From Lake Tear-of-the-Clouds to the mouth of the river the distance by water is probably about 300 miles. The total area drained is 13,366 square miles. The river is tidal to Troy, which is also the head of navigation.

The tributaries of the Hudson are numerous, and many of them are large and important. Indian river, Schroon river, and Sacandaga unite with the main stream above Glens Falls, and between the latter point and Troy, Hudson river receives Batten Kill, Fish creek, Hoosic river and the Mohawk. The tributaries below Troy include Catskill, Esopus and Rondout creeks and Wallkill river from the west, and Kinderhook creek, Jansen kill, Wappinger creek, Fishkill creek and Croton river from the east.

LOWER HUDSON RIVER DRAINAGE BASIN.

DESCRIPTION.

Below Troy the bed of the Hudson river is depressed below tidewater level. The stage of the stream is controlled by tidal action, by the inflow of the main stream and by the lateral drainage jointly. The drainage tributary to this portion of the stream includes the south and east slopes of the Catskill mountain region on the west bank and a series of streams heading near the New York-Massachusetts and the New York-Connecticut lines on the east. These streams include the principal present and proposed sources of municipal water-supply of New York city.

RONDOUT CREEK DRAINAGE BASIN.

DESCRIPTION.

Rondout creek has its source in the heart of the timber-covered mountain group forming Wittemberg chain. It flows southeasterly to Napanoch, where it encounters the foot of Shawangunk range, turns abruptly to the northeast and enters the Hudson river at Rondout. Its watershed on the south is very restricted, as it is separated from the Wallkill river only by the narrow Shawangunk ridge. Notable waterfalls occur at Honk Falls and Napanoch over Hudson river shale, and on Good Beer kill above Ellenville. On Good Beer kill there is a total fall of 870 feet from the Cape, three miles above Ellenville, to Ellenville. Of this about 200 feet are concentrated in a series of cascades, called Hanging Rock Falls.

Water power was originally developed at Napanoch in 1754. At present there are five dams in this village, utilizing a total of 115 feet fall. A series of cascades, involving a descent of about 50 feet, occurs at High Falls, where the water flows over Rosendale cement rock.

RONDOUT CREEK AT ROSENDALE, N. Y.

The Rosendale gaging station is located on the highway bridge and was established by Robert E. Horton for the United States Geological Survey in coöperation with the New York City Water Supply Departments on July 6, 1901; it was assumed by the Board of Water Supply of the city of New York on June 1, 1907, at which time a new standard Board of Water Supply chain gage was put in to replace the old one.

Measurements are taken from the bridge at high and medium stages and by wading at a point about 1,000 feet below the bridge at low stages.

The gage is located on the downstream side of the bridge in the middle panel.

The water is confined to one channel under the single-span steel bridge which is 135.7 feet between abutments, at all stages.

A portion of the water of the creek is diverted by a dam below High Falls and sent through the Delaware and Hudson canal, and is discharged into the creek below the gaging station. At Creek Locks, which is about 1½ miles below Rosendale, there is an overflow weir, from which the approximate discharge of the canal may be obtained. The weir, which has a crest of 3.8 feet, is located at the left end of the lock and is equipped with a standard Board of Water Supply staff gage.

The records here published have been furnished by J. Waldo Smith, Chief Engineer, Board of Water Supply of the city of New York.

Mean Daily Discharge, Second-feet, of Rondout Creek, including D. & H. Canal, at Rosendale, N. Y.

DAY.	Jan.	Feb.	Mar.	April	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	906	972	725	2,740	1,69[illegible]	41	91	8[illegible]	111	7	5[illegible]	42[illegible]
2.....	874	1,035	600	4,932	1,270	365	65	7[illegible]	139	9	7[illegible]	352
3.....	930	1,080	625	6,308	1,010	87[illegible]	13[illegible]	57	27	6	55[illegible]	442
4.....	986	990	650	2,992	890	587	107	6[illegible]	30[illegible]	8[illegible]	362	370
5.....	1,070	923	625	2,096	794	481	94	5[illegible]	24	118	306	690
6.....	1,017	837	417	1,808	842	386	10[illegible]	65	21[illegible]	8[illegible]	253	2,180
7.....	972	909	505	1,736	1,018	569	83	67	179	9[illegible]	734	1,390
8.....	945	873	525	2,240	1,100	522	73	67	9[illegible]	71	3,185	850
9.....	972	938	760	1,570	1,250	381	47	57	9	11[illegible]	2,029	770
10.....	990	873	550	1,430	1,130	333	67	117	13[illegible]	101	1,630	826
11.....	972	1,170	365	1,190	898	293	76	2,326	111	107	695	842
12.....	972	679	445	1,060	794	316	72	620	10[illegible]	101	587	922
13.....	945	635	9,200	1,050	906	305	68	319	157	135	714	778
14.....	909	729	3,286	1,002	922	274	69	237	133	12[illegible]	558	714
15.....	945	779	4,292	1,034	770	326	100	231	101	119	444	530
16.....	972	657	7,580	1,300	1,500	246	98	127	86	127	366	205
17.....	945	1,125	3,908	1,360	4,228	239	90	97	107	106	452	449
18.....	972	801	3,104	2,372	2,108	293	92	122	111	94	434	1,050
19.....	1,035	729	3,160	2,796	1,450	244	87	329	112	106	484	1,470
20.....	1,350	1,044	2,456	1,940	1,110	209	76	277	82	90	440	1,170
21.....	1,305	972	1,904	1,550	970	200	68	204	79	92	368	810
22.....	1,242	1,510	1,640	1,330	842	235	93	258	107	103	322	698
23.....	1,224	2,250	1,210	1,110	714	140	131	189	73	282	233	682
24.....	1,152	1,419	1,400	1,018	682	129	96	219	134	2,907	396	794
25.....	1,080	1,531	1,530	938	602	129	98	216	100	1,950	309	666
26.....	1,035	1,970	1,220	858	521	144	103	143	127	1,584	366	618
27.....	990	1,674	1,230	810	473	127	75	126	155	892	388	754
28.....	945	1,770	1,856	858	521	116	50	111	163	650	372	826
29.....	945	1,475	6,052	1,070	777	97	73	116	121	728	432	690
30.....	972	......	5,444	3,104	784	108	50	71	115	529	402	954
31.....	990	......	3,780	......	545	......	59	84	......	516	......	2,894
Mean.	1,018	1,115	2,292	1,853	1,068	304	83	230	136	395	636	865

Monthly Discharge of Rondout Creek, including D. & H. Canal, at Rosendale, N. Y.
[Drainage area, 380 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1912.					
January	1,350	874	1,018	2.68	3.087
February	2,250	635	2,250	2.93	3.163
March	9,200	365	2,292	6.03	6.953
April	6,308	810	1,853	4.87	5.444
May	4,228	473	1,068	2.81	3.247
June	873	97	304	0.80	0.892
July	131	47	83	0.22	0.254
August	2,326	55	230	0.60	0.693
September	302	73	136	0.36	0.398
October	2,907	69	395	1.04	1.202
November	3,185	233	636	1.67	1.867
December	2,894	205	865	2.28	2.623

RONDOUT CREEK AT LACKAWACK, N. Y.

Rondout creek above its junction with Sandberg creek (called also Lackawack creek) at Napanoch is essentially a mountain stream. At Honk falls a natural declivity affords a fall of 125 feet over tilted strata of Hudson river shale. This fall has been increased to 147.5 feet by the construction of a masonry dam at the head of the gorge.

On May 1, 1910, an automatic gage was established at Lackawack, which is situated a short distance above Honk falls, at which place a record was previously maintained. The records of flow at this gaging station have been furnished for publication by Mr. J. Waldo Smith, Chief Engineer of the Board of Water Supply of the city of New York.

Mean Daily Discharge, Second-feet, of Rondout Creek at Lackawack, N. Y.

DAY.	Jan .	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	206	292	358	873	450	147	39	29	70	60	190	127
2.....	211	267	326	1,590	370	141	39	24	158	60	211	228
3.....	199	238	243	1,590	315	192	39	30	125	56	180	666
4.....	186	184	246	780	279	138	38	26	114	53	164	390
5.....	166	169	254	600	256	127	39	28	95	47	154	315
6.....	134	205	208	600	324	168	39	28	97	44	150	780
7.....	199	182	270	720	291	192	40	20	84	44	270	514
8.....	262	199	311	720	201	141	39	22	78	42	446	410
9.....	315	132	383	502	288	125	40	21	70	44	294	321
10.....	292	103	301	442	256	114	65	110	65	45	259	270
11.....	319	173	259	362	226	111	53	964	60	60	221	234
12.....	333	223	289	324	216	106	53	216	62	59	202	206
13.....	351	199	1,740	306	282	103	38	143	56	62	192	180
14.....	333	218	434	306	248	98	37	113	52	56	231	174
15.....	315	225	1,400	327	231	94	39	97	54	50	199	166
16.....	246	256	1,610	540	466	103	45	81	62	46	184	164
17.....	212	233	804	402	744	116	34	63	53	45	172	154
18.....	215	211	810	648	462	76	39	113	52	44	154	160
19.....	358	212	838	654	370	65	41	129	89	47	141	462
20.....	412	326	792	486	306	62	38	106	74	63	138	297
21.....	347	351	580	350	273	59	45	103	62	57	130	234
22.....	304	805	466	398	248	59	81	129	54	46	123	206
23.....	308	459	386	370	221	60	46	111	54	545	125	188
24.....	301	455	402	321	209	57	34	110	78	545	134	178
25.....	270	610	354	318	199	49	32	92	120	390	211	172
26.....	208	632	279	282	202	47	27	90	87	303	206	162
27.....	248	1,019	297	406	180	41	29	78	68	250	172	231
28.....	238	610	502	315	152	39	21	71	53	211	158	202
29.....	304	459	2,112	478	188	46	25	68	56	192	145	166
30.....	358	......	1,052	654	216	30	33	60	66	176	136	334
31.....	322	......	774	......	156	......	29	59	......	162	......	462
Mean.	273	333	616	555	288	97	40	108	76	126	190	282

Monthly Discharge of Rondout Creek at Lackawack, N. Y.
[Drainage area, 104 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1912.					
January........................	412	134	273	2.62	3.033
February........................	1,019	103	333	3.20	3.454
March........................	2,112	208	616	5.92	6.829
April........................	1,590	282	555	5.34	5.967
May........................	744	152	288	2.77	3.192
June........................	192	30	97	0.93	1.040
July........................	81	21	40	0.38	0.442
August........................	964	20	108	1.04	1.191
September........................	158	52	76	0.73	0.811
October........................	545	42	126	1.21	1.395
November........................	446	123	190	1.83	2.040
December........................	780	127	282	2.71	3.133

ESOPUS CREEK DRAINAGE BASIN.

DESCRIPTION.

Esopus creek has its source in Winnisook lake on the northwestern slope of Slide mountain, the highest peak of the Catskills.

From Big Indian to Olive Bridge the stream flows through a deep valley, flanked on both sides by timber-covered mountains. Numerous sites for dams or storage reservoirs are offered at points where the valley broadens out for a short distance to receive the inflowing waters of tributaries. The most notable are at Big Indian, where Birch creek enters; at the mouth of Bush kill, at Shandaken; at the mouth of Stone Clove creek, at Phoenicia; at Cold Brook, where Little Beaver kill enters, and at Olive Bridge. The stream channel is relatively broad and shallow. The bed is covered with cobbles and small boulders left behind after the erosion of drift deposits which formerly filled the valley. The descent of the stream is rapid, though not precipitous, until Olive Bridge is reached. At this point, the stream flows over a rock ledge in a narrow gorge, forming Bishop's falls. The natural fall is 22 feet and is increased to 28 feet by a timber dam on the crest of the ledge. This dam was originally constructed in 1828. The drainage basin of Esopus creek is mostly shown on the Rosendale, Slide Mountain, Phoenicia and the Kaaterskill quadrangles of the U. S. Geological Survey topographic maps. This stream is of great economical importance, owing to its relatively large yield and its location adjacent to the city of New York, and it has been adopted for the city's water supply. The Ashokan dam and reservoir are now in process of construction by the city. Ashokan dam crosses Esopus creek about one mile downstream from Bishop's falls.

ESOPUS CREEK AT MT. MARION, N. Y.

A gaging station was established at Esopus creek at Mt. Marion on April 4, 1907, by the Board of Water Supply of the city of New York. The bed of the stream at this station is rock and the flow is chiefly confined to a narrow, V-shaped, natural trough during low water. The channel is straight for a considerable distance above and below the bridge. The flow is confined to the main channel at all stages of the stream.

Records here published have been furnished by Mr. J. Waldo Smith, Chief Engineer of the Board of Water Supply.

Mean Daily Discharge, Second-feet, of Esopus Creek at Mt. Marion, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	810	338	1,026	3,385	1,406	585	101	68	164	138	635	485
2	685	302	783	3,730	1,140	485	108	74	260	130	1,000	475
3	635	286	598	7,230	1,070	780	101	68	375	130	810	2,180
4	585	273	585	4,080	979	575	101	68	347	130	675	1,653
5	525	222	472	2,844	912	525	101	63	265	111	585	1,350
6	455	222	356	2,640	1,021	515	115	58	247	101	525	2,013
7	302	234	392	3,000	1,021	625	146	58	234	94	525	2,200
8	472	234	518	3,870	930	485	122	58	222	94	3,385	1,770
9	374	222	837	2,360	1,049	395	111	58	210	87	2,160	1,430
10	450	189	652	1,950	930	325	97	70	182	87	1,743	1,245
11	374	172	572	1,653	810	288	125	1,680	173	101	1,350	1,035
12	428	180	585	1,406	765	273	119	675	164	115	1,091	828
13	518	164	6,924	1,350	1,091	260	108	355	164	115	979	635
14	472	172	3,345	1,245	1,105	222	115	247	155	108	1,070	685
15	410	180	3,385	1,189	1,021	229	108	222	155	108	930	700
16	410	189	11,400	2,760	1,119	222	101	206	155	101	810	625
17	302	189	4,375	2,820	4,180	260	94	169	155	101	700	575
18	302	200	3,385	3,125	2,796	229	87	191	159	101	635	525
19	320	180	3,190	3,450	2,040	210	87	222	173	108	585	1,070
20	1,026	320	3,000	2,676	1,653	200	80	222	164	105	535	1,189
21	932	292	2,460	2,130	1,406	187	83	239	155	91	485	930
22	702	2,214	2,130	1,770	1,210	177	91	282	146	87	443	828
23	608	2,124	1,635	1,725	1,070	155	101	443	146	318	415	750
24	630	1,674	1,617	1,470	948	138	93	475	173	3,730	443	685
25	562	1,634	1,390	1,390	828	146	68	375	182	2,676	1,470	625
26	392	1,962	1,231	1,210	715	146	68	294	182	2,040	930	575
27	320	2,668	1,161	1,119	625	138	63	255	173	1,470	792	840
28	338	2,214	1,454	1,021	535	138	58	229	159	1,189	665	1,070
29	320	1,512	4,780	1,000	550	130	58	210	146	948	585	840
30	338	......	5,412	1,887	948	115	53	195	146	780	535	900
31	374	......	3,520	......	750	......	63	173	......	685	......	979
Mean	496	719	2,360	2,383	1,181	305	94	258	191	522	916	1,022

Monthly Discharge of Esopus Creek at Mt. Marion, N. Y.
[Drainage area, 378 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET..				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square miles.	Depth in inches on drainage area.
1912.					
January	1,026	302	496	1.31	1.510
February	2,668	164	719	1.90	2.057
March	11,400	356	2,360	6.24	7.198
April	7,230	1,000	2,383	6.31	7.033
May	4,180	535	1,181	3.12	3.598
June	780	115	305	0.81	0.904
July	146	53	94	0.25	0.289
August	1,680	58	258	0.68	0.790
September	375	146	191	0.51	0.562
October	3,730	87	522	1.38	1.594
November	3,385	415	916	2.42	2.708
December	2,200	475	1,022	2.70	3.114

ESOPUS CREEK AT WEIR NEAR OLIVE BRIDGE, N. Y.

The weir is constructed of concrete, having a cross-section similar to that experimented on in hydraulic laboratory at Cornell University by the United States Geological Survey, in Series 30, described in Water Supply and Irrigation Paper No. 200.[a]

The average height of this weir above the rock on which it is founded for its entire length is 7.54 feet; length between abutments, 193.90 feet. In order to form a channel of approach, the abutments have been extended upstream at right angles with the axis of the weir for a distance of 16 feet and the area of the channel of approach below the crest of the weir is 1,462 square feet. The abutments extend 14 feet above the level of the crest and it is estimated that a flow of 40,000 cubic feet per second can be taken care of.

Measurements of the head on the weir are made in a well 24 inches in diameter, situated 53 feet upstream from the crest of the weir. Water is admitted to this well though a ¾-inch pipe extending 16 feet out into the stream, in which, spaced 6 inches apart, are ⅛-inch holes bored vertically through the pipe. The center of this pipe is placed 18 inches above the bed of the stream. A continuous record of the head at this point is kept by means of a Friez automatic water-stage register, geared 1 to 1 and running twenty-four hours. Observations of the flow were first begun on October 17, 1906, though the automatic gage register was not installed until December 5. Prior to this latter date heads were read three times daily and reduced in the usual manner.

Computations of the discharge over this weir are made from a formula which has been deduced from the results of the experiments made by the United States Geological Survey and referred to above. During the winter the ice which forms between the wing walls that form the channel of approach is kept away so that there may be no change in the conditions of flow due to this cause. The watershed of Esopus creek above the weir is 239 square miles, as measured on the topographic maps of the United States Geological Survey.

The records here published have been furnished by J. Waldo Smith, Chief Engineer, Board of Water Supply of New York city.

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[a] "Weir Experiments, Coefficients and Formulas," by Robert E. Horton.

Mean Daily Discharge, Second-feet, of Esopus Creek at Weir near Olive Bridge, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	620	215	667	2,415	1,033	370	67	57	150	122	493	286
2.....	467	175	509	3,470	876	366	67	53	256	122	600	493
3.....	448	144	389	5,100	760	362	62	62	228	122	483	1,509
4.....	410	150	380	2,750	668	299	62	57	215	116	428	1,129
5.....	333	182	307	1,850	597	290	72	48	182	110	392	945
6.....	264	162	231	1,980	684	296	133	44	194	100	366	1,495
7.....	196	133	255	2,800	611	301	105	44	194	94	650	1,373
8.....	307	110	336	2,950	598	255	78	40	175	94	1,780	1,105
9.....	243	110	544	1,796	626	234	72	44	156	89	1,217	910
10.....	292	110	424	1,410	590	214	122	144	144	94	978	785
11.....	243	84	372	1,110	584	189	110	1,551	133	89	830	693
12.....	278	116	380	908	584	182	105	483	144	89	725	600
13.....	337	84	3,826	761	692	174	94	308	150	78	640	475
14.....	307	105	1,443	670	682	157	105	242	144	72	693	467
15.....	266	133	4,150	800	655	162	105	215	139	72	600	428
16.....	266	116	5,510	3,205	1,700	175	89	175	156	67	525	410
17.....	196	110	3,870	2,142	2,700	175	78	144	156	67	475	375
18.....	196	110	2,318	2,455	1,850	162	78	188	144	67	448	358
19.....	208	117	2,220	2,378	1,565	150	72	215	144	67	410	753
20.....	667	208	2,238	1,780	1,082	144	62	235	139	62	382	640
21.....	606	255	1,850	1,365	910	122	72	242	127	62	358	550
22.....	456	1,439	1,410	1,090	830	122	84	301	116	62	333	512
23.....	395	1,381	1,135	1,035	728	110	62	400	116	1,165	312	483
24.....	410	1,088	934	855	603	105	57	366	127	1,810	467	456
25.....	365	1,062	748	907	550	105	53	308	169	1,593	763	428
26.....	255	1,275	571	802	475	100	53	271	150	1,191	502	400
27.....	208	1,734	500	774	452	94	53	242	127	898	420	532
28.....	220	1,439	723	658	405	84	48	208	122	732	375	542
29.....	208	983	2,900	800	384	78	53	182	122	620	333	448
30.....	220	......	3,020	1,108	491	72	62	162	122	525	308	956
31.....	243	......	2,165	......	415	......	57	150	......	456	......	1,321
Mean.	327	460	1,494	1,737	819	188	77	232	155	352	576	705

Monthly Discharge of Esopus Creek at Weir near Olive Bridge, N. Y.

[Drainage area, 239 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1912.					
January	667	196	327	1.37	1.577
February	1,734	84	460	1.92	2.071
March	5,510	231	1,494	6.25	7.208
April	5,100	658	1,737	7.27	8.107
May	2,700	384	819	3.43	3.948
June	370	72	188	0.79	0.876
July	133	48	77	0.32	0.370
August	1,551	40	232	0.97	1.116
September	256	116	155	0.65	0.718
October	1,810	62	352	1.47	1.698
November	1,780	308	576	2.41	2.691
December	1,509	286	705	2.95	3.415

KINDERHOOK CREEK.

KINDERHOOK CREEK AT ROSSMAN, N. Y.

A gaging station was established at Rossman highway bridge on Kinderhook creek, March 17, 1906, by Robert E. Horton. This gaging station is maintained by the U. S. Geological Survey in coöperation with this Department. The gage is of the weight-tape-and-reel pattern, and readings are taken morning, noon and evening by Wesley Ham.

The channel is rock, and is nearly straight for some distance above and below the gage.

The station is about one-quarter mile below a dam, and very little ice obstruction occurs except in extreme cold weather.

A description of Kinderhook creek, with the results of gagings made in 1892–1894, may be found in the report of the State Engineer and Surveyor for 1902, supplement, pages 252–256.

During 1912 some special work has been done to determine the effect of diurnal fluctuation of discharge in this stream, caused by mills above the station. A portable automatic gage was set up near the observer's gage and a continuous automatic record of gage heights was obtained from August 3 to August 12, inclusive, and from November 30 to December 5, inclusive.

If this stream were under conditions of normal flow, the mean gage height for each day would be computed by taking the average of the observer's two readings — at 5:00 A. M. and 6:00 P. M. The mean gage height for each full day that a continuous record was obtained was computed by taking the mean of hourly gage heights. The discharge obtained from this gage height was compared with the discharge obtained from the regular semidaily readings. A correction multiplier was determined, which should be applied to the ordinary discharges to get the true discharge. The correction which should be multiplied into the discharge obtained from semidaily readings is plotted against such a discharge for each day that a continuous record was obtained. A distinction between week days and Sundays is indicated on the sheet. From inspection of this curve it is seen that, when the mean daily discharge is above 100 second-feet, the correction is approximately unity and, therefore, the diurnal fluctuation due to power operation on this stream can be neglected. A fairly good estimate can be obtained from semidaily gage heights for portions of the year when the mean daily discharge is above 100 second-feet. If a reliable record is needed at this station for portions of the year when the discharge is below this amount, an automatic gage must be installed.

Caution.— We have no evidence to show whether the diurnal fluctuations during the period studied obtain during the whole low-water period. Therefore, an estimate has not been prepared on the basis of the above mentioned corrections. The rating table is published for this station, so that this estimate may be made, if desired.

Mean Daily Gage Height, in Feet, of Kinderhook Creek at Rossman, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1911.												
1......	28.60	27.38	26.86	28.20	27.37	26.66	26.66	26.51	27.30	27.00	27.70	27.70
2......	28.80	27.55	27.06	27.85	27.47	26.71	26.45	26.34	27.13	27.42	27.65	27.65
3......	28.80	27.46	26.96	27.70	27.60	26.66	26.50	26.35	26.82	27.35	27.65	27.55
4......	28.25	27.55	27.08	27.70	27.55	26.66	26.50	26.48	26.87	27.46	27.60	27.50
5......	28.05	27.42	27.80	27.75	27.45	26.65	26.56	26.30	26.76	27.75	27.50	27.50
6......	28.15	27.55	27.65	29.00	27.29	26.69	26.69	26.28	26.83	27.65	27.42	27.38
7......	28.25	27.60	27.48	29.50	27.29	27.12	26.64	26.52	26.98	27.50	27.42	27.22
8......	28.25	27.55	27.43	28.90	27.18	26.95	26.55	26.61	27.19	27.50	27.50	27.31
9......	27.80	27.30	27.35	28.60	27.17	26.95	26.44	26.48	27.48	27.50	27.44	27.38
10......	27.75	27.13	27.29	28.60	27.02	26.85	26.55	26.18	28.10	27.43	27.43	27.32
11......	27.60	27.00	27.22	28.80	27.04	26.69	26.56	26.09	27.70	27.34	27.42	27.41
12......	27.55	26.83	27.10	28.60	26.91	26.69	26.58	26.04	27.48	27.14	27.25	27.40
13......	27.70	26.70	27.48	28.25	26.95	28.15	26.66	26.22	27.25	26.98	27.80	27.41
14......	27.70	26.56	27.80	28.30	27.12	28.50	26.57	26.44	27.11	26.90	27.65	27.36
15......	27.55	26.59	29.60	28.35	27.01	28.15	26.12	26.48	27.20	26.95	27.60	27.41
16......	27.35	26.50	28.70	28.70	26.86	27.85	26.16	26.51	27.14	26.95	27.65	27.55
17......	27.36	26.66	27.48	28.50	26.94	27.46	26.38	26.63	27.11	27.00	27.50	27.95
18......	27.33	26.80	27.13	28.20	26.87	27.25	26.55	26.41	27.13	27.22	27.60	27.80
19......	27.37	27.75	27.36	28.15	26.97	27.18	26.58	26.38	26.98	29.10	28.15	27.60
20......	27.55	27.85	27.48	28.00	26.97	27.20	26.70	26.20	26.96	28.50	27.85	27.50
21......	27.28	27.43	27.55	27.85	26.97	27.02	26.53	26.27	26.92	28.35	27.75	27.39
22......	27.46	26.63	27.70	27.80	26.86	26.88	26.55	26.44	26.85	28.70	27.65	27.55
23......	27.13	26.34	28.15	27.70	27.80	26.74	26.34	26.32	27.08	29.40	27.60	28.30
24......	27.02	26.36	27.85	27.75	26.81	26.72	26.55	26.50	27.05	29.60	27.60	28.45
25......	26.80	26.63	27.35	27.65	26.82	26.66	26.42	26.62	26.82	29.00	27.90	28.40
26......	26.82	27.26	27.38	27.44	26.78	26.66	26.56	26.44	26.70	28.60	27.65	27.85
27......	26.78	27.26	28.50	27.44	26.76	26.74	26.52	26.30	26.90	28.25	27.65	28.10
28......	29.10	27.10	30.20	27.46	26.68	26.68	26.61	26.51	26.85	28.10	27.70	28.20
29......	27.95	......	28.80	27.38	26.69	26.73	26.28	27.48	26.96	27.85	28.10	27.80
30......	27.85	......	30.10	27.40	26.62	26.75	26.26	27.75	26.94	27.80	27.85	27.60
31......	27.55	......	29.00	......	26.59	......	26.51	27.45	......	27.65	......	27.60

NOTE.— Relation of gage height to discharge during 1911 was affected but little, if any, by ice

Mean Daily Gage Height, in Feet, of Kinderhook Creek at Rossman, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1......	27.50	......	......	29.10	28.05	28.25	26.69	26.24	26.26	26.48	27.47	27.37
2......	27.55	......	......	29.20	27.75	28.00	26.62	26.35	26.33	26.50	27.44	27.70
3......	27.60	......	......	30.20	27.60	28.20	26.60	26.34	26.74	26.58	27.31	28.10
4......	27.65	......	......	29.20	27.60	28.20	26.40	26.30	26.72	26.53	27.24	28.05
5......	27.36	......	......	29.00	27.60	27.85	26.37	26.20	26.76	26.52	27.21	27.85
6......	27.25	......	......	29.10	27.60	27.70	26.23	26.27	26.64	26.39	27.22	27.90
7......	27.11	......	......	29.30	27.85	27.95	26.22	26.32	26.69	26.42	27.31	27.95
8......	27.40	......	......	30.80	27.60	27.75	26.14	26.22	26.68	26.55	28.20	27.80
9......	27.41	......	......	29.60	27.65	27.50	26.15	26.22	26.76	26.52	28.20	27.60
10......	27.42	......	......	29.40	28.00	27.43	26.46	26.15	26.52	26.49	27.90	27.55
11......	27.50	......	......	29.20	27.90	27.36	26.58	26.29	26.60	26.48	27.75	27.55
12......	27.50	......	......	28.80	27.70	27.18	26.60	26.16	26.50	26.55	27.65	27.41
13......	27.75	......	......	28.60	27.70	27.13	26.53	26.15	26.58	26.32	27.48	27.36
14......	27.80	......	......	28.40	27.70	27.15	26.59	26.16	26.40	26.35	27.41	27.28
15......	27.75	......	......	28.30	27.65	27.28	26.63	26.19	26.38	26.54	27.80	27.22
16......	27.90	......	28.70	28.90	27.70	27.15	26.41	26.16	26.68	26.59	27.60	27.36
17......	27.95	......	30.80	29.60	28.45	26.92	26.34	26.14	26.85	26.58	27.48	27.32
18......	28.10	......	29.20	29.40	28.25	26.95	26.42	26.22	26.75	26.56	27.38	27.33
19......	28.00	......	29.40	29.10	28.10	26.88	26.45	26.14	26.74	26.52	27.29	27.65
20......	28.40	......	29.10	28.90	27.90	26.91	26.46	26.16	26.72	26.42	27.29	28.10
21......	......	......	28.80	28.50	27.85	26.85	26.32	26.28	26.65	26.31	27.34	27.80
22......	......	......	28.35	28.40	27.95	26.84	26.51	26.14	26.56	26.52	27.34	27.55
23......	......	......	28.15	28.40	27.85	26.76	26.53	26.18	26.61	26.70	27.31	27.50
24......	......	......	27.38	28.60	27.65	26.77	26.56	26.42	26.61	29.80	27.21	27.48
25......	......	......	27.80	28.50	27.55	26.74	26.48	26.35	26.68	29.60	28.00	27.50
26......	......	......	27.90	28.30	27.50	26.72	26.18	26.42	26.67	28.50	28.00	27.80
27......	......	......	28.20	28.20	27.45	26.76	26.25	26.36	26.62	28.30	27.80	27.90
28......	......	......	28.30	27.90	27.43	26.68	26.27	26.38	26.66	27.90	27.60	27.80
29......	......	......	29.30	27.90	27.55	26.58	26.19	26.18	26.50	27.70	27.50	27.65
30......	......	......	29.70	28.10	28.80	26.40	26.16	26.28	26.28	27.55	27.50	27.70
31......	......	......	28.90	......	28.35	......	26.42	26.28	......	27.50	......	28.60

NOTE.— Relation of gage height to discharge was affected by ice, January 21 to March 15.

Current-meter Discharge Measurements of Kinderhook Creek at Rossman, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Discharge.
1912.			*Sec.-ft.*
Aug. 8..........	Frank Weber..............................	26.53	62
Sept. 9 *b*........	J. G. Mathers..............................	26.77	120
Oct. 29..........	Frank Weber..............................	27.90	749
Dec. 2..........	C. S. De Golyer..............................	27.39	406

b Made by wading below gage.

Rating Table for Kinderhook Creek at Rossman, N. Y., for 1910, 1911 *and* 1912.

Gage height.	Discharge.	Gage height.	Discharge.
Feet.	*Sec.-ft.*	*Feet.*	*Sec.-ft.*
26.00	7	26.60	94
26.10	13	26.70	122
26.20	22	26.80	153
26.30	34	26.90	187
26.40	50	27.00	225
26.50	70	....	....

Mean Daily Discharge, Second-feet, of Kinderhook Creek at Rossman, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1911.												
1.....	1,340	401	173	988	380	111	111	......	359	225	602	602
2.....	1,540	502	249	710	453	125	......	......	278	424	568	568
3.....	1,540	467	209	602	534	111	......	......	160	386	568	502
4.....	1,030	502	257	602	502	111	......	......	160	447	534	470
5.....	866	424	673	638	441	108	......	......	141	638	470	470
6.....	948	502	568	1,750	354	119	119	......	163	568	424	401
7.....	1,030	534	458	2,340	354	274	105	......	218	470	424	320
8.....	1,030	502	429	1,640	301	206	......	......	305	470	470	364
9.....	673	359	386	1,340	296	206	......	......	458	470	435	401
10.....	638	278	354	1,340	233	170	......	......	906	429	429	370
11.....	534	255	320	1,540	241	119	......	......	602	379	424	418
12.....	502	163	265	1,340	191	119	......	......	458	283	334	412
13.....	602	122	458	1,070	206	947	111	......	334	218	673	418
14.....	602	......	673	1,070	274	1,250	......	......	270	187	568	390
15.....	502	......	2,460	1,120	229	947	......	......	310	206	534	418
16.....	386	......	1,440	1,440	173	710	......	......	283	206	568	502
17.....	391	111	458	1,250	202	447	......	102	270	225	470	787
18.....	375	153	278	988	177	334	......	......	278	320	534	673
19.....	396	638	391	947	214	301	......	......	218	1,860	947	534
20.....	502	710	458	826	214	310	122	......	210	1,250	710	470
21.....	349	429	502	710	214	233	......	......	195	1,110	638	407
22.....	447	102	602	673	173	180	......	......	170	1,440	568	502
23.....	278	......	947	602	673	134	......	......	257	2,210	534	1,070
24.....	233	......	710	638	156	128	......	......	245	2,460	534	1,210
25.....	153	102	386	568	160	111	......	......	160	1,750	748	1,160
26.....	160	339	401	435	146	111	......	......	122	1,440	568	710
27.....	147	339	1,250	435	141	134	......	......	187	1,030	568	906
28.....	1,860	265	3,280	447	116	116	......	......	170	906	602	988
29.....	787	......	1,540	401	119	131	......	458	210	710	906	673
30.....	710	......	3,140	412	100	138	......	638	202	673	710	534
31.....	502	......	1,750	......	92	......	......	441	......	568	......	534

Mean Daily Discharge, Second-feet, of Kinderhook Creek at Rossman, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	470	......	......	1,860	866	1,030	119	......	......	......	453	396
2.....	502	......	......	1,980	638	826	100	......	......	......	435	602
3.....	534	......	......	3,280	534	988	......	......	134	......	364	906
4.....	568	......	......	1,980	534	988	......	......	128	......	330	866
5.....	391	......	......	1,750	534	710	......	......	141	......	315	710
6.....	334	......	......	1,860	534	602	......	......	105	......	320	748
7.....	270	......	......	2,090	710	787	......	......	119	......	364	787
8.....	412	......	......	4,200	534	638	......	......	116	......	988	673
9.....	418	......	......	2,460	568	470	......	......	141	......	988	534
10.....	424	......	......	2,210	826	429	......	......	......	......	748	502
11.....	470	......	......	1,980	748	391	......	......	......	......	638	502
12.....	470	......	......	1,540	602	301	......	......	......	......	568	418
13.....	638	......	......	1,340	602	278	......	......	......	......	458	391
14.....	673	......	......	1,160	602	288	......	......	......	......	418	349
15.....	638	......	......	1,070	568	349	102	......	......	......	673	320
16.....	748	......	1,440	1,640	602	288	......	......	116	......	534	391
17.....	787	......	4,200	2,460	1,210	195	......	......	170	......	458	370
18.....	906	......	1,980	2,210	1,030	206	......	......	138	......	401	375
19.....	826	......	2,210	1,860	906	180	......	......	134	......	354	568
20.....	1,160	......	1,860	1,640	748	191	......	......	128	......	354	906
21.....	......	......	1,540	1,250	710	170	......	......	108	......	380	673
22.....	......	......	1,120	1,160	787	167	......	......	111	......	380	502
23.....	......	......	947	1,160	710	141	......	......	......	122	364	470
24.....	......	......	401	1,340	568	144	......	......	......	2,720	315	458
25.....	......	......	673	1,250	502	134	......	......	116	2,460	826	470
26.....	......	......	748	1,070	470	128	......	......	114	1,250	826	673
27.....	......	......	988	988	441	141	......	......	100	1,070	673	748
28.....	......	......	1,070	748	429	116	......	......	111	748	534	673
29.....	......	......	2,090	748	502	......	......	......	......	602	470	568
30.....	......	......	2,590	906	1,540	......	......	......	......	502	470	602
31.....	......	......	1,640	......	1,120	......	......	......	......	470	......	1,340

NOTE.— Daily discharge determined from a rating curve that is not well defined for high stages. When flow is below 100 second-feet, diurnal fluctuations make records too uncertain to publish.

Monthly Discharge of Kinderhook Creek at Rossman, N. Y.
[Drainage area, 331 square miles.]

MONTH.	Discharge in Second-feet.				Run-off.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1911.					
January	1,860	147	679	2.05	2.36
February	710	60	306	0.924	0.96
March	3,280	173	821	2.48	2.86
April	2,340	401	962	2.91	3.25
May	673	92	260	0.785	0.91
June	1,250	108	281	0.849	0.95
September	906	122	277	0.837	0.93
October	2,460	187	773	2.34	2.70
November	947	334	569	1.72	1.92
December	1,210	320	587	1.77	2.04

Monthly Discharge of Kinderhook Creek at Rossman, N. Y.
[Drainage area, 331 square miles.]

MONTH.	Discharge in Second-feet.				Run-off.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1912.					
March	4,200	401	1,590	4.80	2.86
April	4,200	748	1,710	5.17	5.77
May	1,540	429	699	2.11	2.43
June	1,030	....	381	1.15	1.28
October	2,720	....	1,100	3.32	1.11
November	988	315	513	1.55	1.73
December	1,340	320	596	1.80	2.08

MOHAWK RIVER DRAINAGE BASIN.

DESCRIPTION.

Mohawk river, the largest of the tributaries of the Hudson river, rises in the sandy hills south of Boonville, in central New York, about 40 miles from the east end of Lake Ontario. Its uppermost tributaries are fed by large springs, and in addition the stream receives considerable water brought in from the adjacent Black river drainage basin for the supply of the Black River and Erie canals.

The Mohawk flows southward until it reaches the city of Rome, at which point it turns to the east, flowing across the state in a course a little south of east until it enters the Hudson at Cohoes, a few miles above Troy. It has a length by actual course of 140 to 145 miles, and a drainage area, measured at the mouth, of about 3,468 square miles, according to U. S. Geological Survey topographic maps.

The immediate valley of the Mohawk is broad and open, at many places a mile or two in width, from which there is a rise, usually gradual but sometimes abrupt, to hills which attain altitudes several hundred feet above the stream. Toward the mouth of the river the valley becomes more contracted and the meadows disappear. The flats which border the stream have a rich alluvial soil; the more elevated lands are covered with gravelly loam and clay.

Above Rome the Mohawk flows through a deep gorge in shale rock; from Rome eastward to Little Falls the valley is deeply filled with alluvial deposits, and the flood plains on either side become submerged during freshets, thus acting to some extent as storage reservoirs. At Little Falls the river cuts through a rocky gorge, whose walls rise precipitously 500 or 600 feet.

Below Rome the fall of the river is small and rather uniform, being made up of long quiet reaches with slight riffles; but at Little Falls this uniformity is broken, and the stream descends in a succession of falls about 45 feet in 2,500. The average fall between Rome and the lower aqueduct at Crescent, a distance of 110.7 miles, is 2.43 feet per mile; thence to the level of slack water above Troy dam there is a farther descent of 149.5 feet in 4.4 miles, but of this 105 feet is included within the improved power at Cohoes.

The principal tributaries of the Mohawk below the source are, successively, Oriskany, West Canada, East Canada and Schoharie creeks.

The Erie canal runs parallel to the Mohawk through most of its course below Rome and derives a part of its water-supply from the river. Feeder dams for purposes of diversions are located on the river at Delta, Rome, Little Falls, Rocky Rift and Rexford Flats. A dam at Oriskany creek also diverts into the canal a portion of the flow of that tributary, as well as waters brought into the Mohawk basin from storage reservoirs located in the upper drainage basin of Chenango river near Hamilton, N. Y. There is also a diversion dam near the mouth of Schoharie creek, the largest tributary of the Mohawk.

Drainage Areas of Mohawk River and Tributaries.
(From U. S. G. S. topographic maps.)

LIMITS.	AREA IN SQUARE MILES.			
	Place to place.	Sub-total.	Branch total.	Total.
Lansingkill.				
Source to junction with West branch	29.41	....	29.41	....
Mohawk River.				
Source of West branch to junction with East branch	19.25	19.25	....	....
Source of East branch to junction with West branch	15.16	34.41	....	....
Junction of East and West branches to and including first large creek to north	5.86	40.27	....	....
First creek below junction to and including second large creek to north	6.08	46.35	....	....
Second creek below junction to junction of Lansingkill, Hillside	3.40	49.75	49.75	79.16
Junction at Hillside to mouth of Stringer brook	1.17	....	....	80.33
Stringer Brook.				
Source to mouth	13.43	....	13.43	93.76
Mohawk River.				
Junction of Stringer brook to mouth of Big brook (Frenchville)	3.02	....	....	96.78
Big Brook.				
Source to mouth	22.86	....	22.86	119.64
Mohawk River.				
Junction of Big brook (Frenchville) to State feeder dam at Delta	16.25	....	....	135.89
State feeder dam at Delta to highway bridge below new Delta dam	11.97	....	....	147.86
Highway bridge below new Delta dam to Ridge Mills dam	7.74	....	....	155.60
Ridge Mills dam to Floyd Ave. bridge	2.59	....	....	158.19
Floyd Ave. bridge to State dam at Rome	2.55	....	....	160.74
State dam at Rome to mouth of Six-Mile creek	26.40	....	....	187.14
Six-Mile Creek.				
Source to mouth	14.94	....	14.94	202.08
Mohawk River.				
Mouth of Six-Mile creek to mouth of Nine-Mile creek	5.29	....	....	207.37
Nine-Mile Creek.				
Source to South Trenton	19.62	....	....	....
South Trenton to crossing of 500-foot contour	6.54	26.16	....	....
Crossing of 500-foot contour to first bridge above Holland Patent	2.49	28.65	....	....
First bridge above Holland Patent to first bridge below Holland Patent	12.71	41.36	....	....
First bridge below Holland Patent to Stittville	6.12	47.48	....	....
Stittville to first bridge below Stittville (Powell's bridge)	11.59	59.07	....	....
Powell's bridge to third bridge below Stittville	10.34	69.41	....	....
Third bridge below Stittville to mouth	0.79	70.20	70.20	277.57
Mohawk River.				
Mouth of Nine-Mile creek to mouth of Oriskany creek	6.19	....	....	283.76
*Areas diverted from Chenango river basin.**				
Chenango river from source to junction with Eaton brook at Eaton	25.25	....	....	25.25
Eaton brook from source to Eaton reservoir dam	9.16	9.16	....	....
Eaton reservoir dam to junction with Chenango river at Eaton	6.69	15.85	15.85	41.10
Chenango river, junction Eaton brook to head of feeder canal	2.99	....	....	44.09

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* Not included in totals for Mohawk river areas.

Drainage Areas of Mohawk River and Tributaries—(Continued).
(From U. S. G. S. topographic maps.)

LIMITS.	AREA IN SQUARE MILES.			
	Place to place.	Sub-total.	Branch total.	Total.
Areas diverted from Chenango river basin — (Con).				
Bradley brook from source to Bradley reservoir dam	3.04	....	....	....
Bradley reservoir dam to head of feeder canal	4.57	7.61	....	....
Kingsley brook from source to Kingsley reservoir dam	5.12	....	....	....
Kingsley reservoir dam to junction with Bradley brook feeder canal	1.75	6.87	14.48	58.57
Head of feeder, Chenango river to junction of feeders, Woodman pond	2.04	....	....	60.61
Payne brook from source to Madison reservoir dam	8.73	....	....	....
Madison reservoir dam to junction of feeders, Woodman pond	2.04	10.77	10.77	71.38
Junction of feeders, Woodman pond to junction with Leland pond outlet	3.26	....	....	74.64
Source, Leland creek to canal reservoir dam	6.74	....	....	81.38
Junction with Leland pond outlet to natural watershed limits	6.53	....	....	87.91
Oriskany Creek.				
Source of Oriskany creek to bridge at Solsville	7.84	....	....	....
Solsville to Oriskany Mills	13.27	21.11	....	....
Oriskany Mills to junction with Big creek (Deansboro)	16.54	37.65	....	....
Source of Big creek to junction with Oriskany creek (Deansboro)	20.32	57.97	....	....
Junction with Big creek to Farmers Mills	14.09	72.06	....	....
Farmers Mills to Clinton	11.11	83.17	....	....
Clinton to Kirkland	4.73	87.90	....	....
Kirkland to dam above Clark Mills	5.76	93.66	....	....
Dam above Clark Mills to Walesville	9.92	103.58	....	....
Walesville to Colemans	36.99	140.57	....	....
Colemans to State dam above Oriskany	5.47	146.04	....	....
State dam above Oriskany to mouth of Oriskany creek	0.78	146.82	146.82	430.58
MOHAWK RIVER.				
Mouth of Oriskany creek to mouth of Sauquoit creek	15.68	....	....	446.26
Sauquoit Creek.				
Source of Sauquoit creek to Cassville	7.17	....	....	....
Cassville to dam at Clayville	4.71	11.88	....	....
Dam at Clayville to dam at Sauquoit	12.54	24.42	....	....
Dam at Sauquoit to dam above Chadwick	4.28	28.70	....	....
Dam above Chadwick to 700-foot contour at Willowvale	3.72	32.42	....	....
700-foot contour at Willowvale to dam at Washington Mills	11.37	43.79	....	....
Dam at Washington Mills to dam above New Hartford	2.92	46.71	....	....
Dam above New Hartford to dam at Capron	1.52	48.23	....	....
Dam at Capron to dam below Capron	2.20	50.43	....	....
Dam below Capron to upper dam at New York Mills	0.49	50.92	....	....
Upper dam at New York Mills to mouth of Sauquoit creek	14.58	65.50	65.50	511.76
MOHAWK RIVER.				
Mouth of Sauquoit creek to Black River R. R. bridge at Utica	13.09	....	....	524.85
Black River R. R. bridge at Utica to mouth of Reels creek	2.70	....	....	527.53
Reels Creek.				
Source to mouth	9.69	....	9.69	537.24
Ballou Creek.				
Source to mouth	4.57	....	4.57	541.81

Drainage Areas of Mohawk River and Tributaries — (Continued).
(From U. S. G. S. topographic maps.)

LIMITS.	AREA IN SQUARE MILES.			
	Place to place.	Sub-total.	Branch total.	Total.
MOHAWK RIVER.				
Mouth of Ballou creek to mouth of Starch Factory creek	1.99	....	....	543.80
Starch Factory Creek.				
Source to mouth	7.22	....	....	551.02
MOHAWK RIVER.				
Mouth of Starch Factory creek to mouth of Sterling creek	30.93	....	....	581.95
Sterling Creek.				
Source to mouth	19.94	....	....	601.89
MOHAWK RIVER.				
Mouth of Sterling creek to mouth of Moyer creek	14.85	....	....	616.74
Moyer Creek.				
Source to mouth	21.66	....	....	638.40
MOHAWK RIVER.				
Mouth of Moyer creek to mouth of Steels creek	7.30	....	....	645.70
Steels Creek.				
Source to mouth	29.54	....	....	674.24
MOHAWK RIVER.				
Mouth of Steels creek to Mohawk-Herkimer road bridge	33.07	....	....	707.31
Mohawk-Herkimer road bridge to mouth of West Canada creek	7.51	....	....	714.82
*West Canada Creek.**				
Source to mouth	583.64	....	....	1,298.46
MOHAWK RIVER.				
Mouth of West Canada creek to State dam at Little Falls	26.07	....	....	1,324.53
State dam at Little Falls to Gilberts dam	4.20	....	....	1,328.73
Gilberts dam to Rocky Rift feeder dam	11.82	....	....	1,340.55
Crum Creek.				
Source to mouth	11.40	....	....	1,351.95
MOHAWK RIVER.				
Mouth of Crum creek (feeder dam) to mouth of Nowadaga creek	0.27	....	....	1,352.22
Nowadaga Creek.				
Source to mouth	32.43	....	....	1,384.65
MOHAWK RIVER.				
Mouth of Nowadaga creek to mouth of East Canada creek	4.65	....	....	1,389.30
*East Canada Creek.**				
Source to mouth	281.61	....	....	1,670.91
MOHAWK RIVER.				
Mouth of East Canada creek to mouth of East Crum creek	0.59	....	....	1,671.50
East Crum Creek.				
Source to mouth	15.55	....	....	1,687.05
MOHAWK RIVER.				
Mouth of East Crum creek to mouth of Timmerman creek	3.31	....	....	1,690.36

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* For subareas, see separate table.

Drainage Areas of Mohawk River and Tributaries — (Continued).
(From U. S. G. S. topographic maps.)

LIMITS.	AREA IN SQUARE MILES			
	Place to place.	Sub-total.	Branch total.	Total.
Timmerman Creek.				
Source to mouth	16.38	....	....	1,706.74
MOHAWK RIVER.				
Mouth of Timmerman creek to mouth of Zimmerman creek	0.52	....	....	1,707.26
Zimmerman Creek.				
Source to mouth	14.63	....	....	1,721.89
MOHAWK RIVER.				
Mouth of Zimmerman creek to St. Johnsville bridge	0.54	....	....	1,722.43
St. Johnsville bridge to mouth of Garoga creek	12.05	....	....	1,734.48
Garoga Creek.				
Source of Garoga creek to foot of East Garoga lake	10.44	....	....	....
Foot of East Garoga lake to foot of pond, Newkirk Mills	3.18	13.62	....	....
Foot of pond, Newkirk Mills, to junction with Peck lake outlet	9.11	22.73	22.73	....
Source of Woodworth lake to foot of Peck lake	16.29	....	....	....
Foot of Peck lake to junction with Garoga creek	4.52	20.81	43.54	....
Junction with Peck lake outlet to Rockwood	7.20	....	50.74	....
Rockwood to Garoga	2.19	....	52.93	....
Garoga to mouth of Sprite creek	4.99	....	57.92	....
Source of Sprite creek to mouth	14.13	....	72.05	....
Mouth of Sprite creek to fourth highway bridge above mouth	13.19	....	85.24	....
Fourth highway bridge above mouth to second highway bridge above mouth	7.78	....	93.02	....
Second highway bridge above mouth to first highway bridge above mouth	1.17	....	94.19	....
First highway bridge above mouth to mouth of Garoga creek	0.51	....	94.70	1,829.18
MOHAWK RIVER.				
Mouth of Garoga creek to Fort Plain	12.70	....	....	1,841.88
Fort Plain to Canajoharie	67.92	....	....	1,909.80
Canajoharie Creek.				
Source to mouth	69.22	....	69.22	1,979.02
MOHAWK RIVER.				
Canajoharie to Sprakers	9.94	....	....	1,988.96
Flat Creek.				
Source to mouth	49.11	....	49.11	2,038.07
MOHAWK RIVER.				
Sprakers to mouth of Yatesville creek	17.56	....	....	2,055.63
Yatesville Creek.				
Source to mouth	12.71	....	12.71	2,068.34
MOHAWK RIVER.				
Mouth of Yatesville creek to mouth of Cayadutta creek	24.48	....	....	2,092.82
Cayadutta Creek.				
Source of Cayadutta creek to Johnstown (Main street bridge)	35.16	....	....	....
Johnstown (Main street bridge) to dam above Sammonsville	2.84	38.00	....	....
Dam above Sammonsville to dam at Sammonsville	3.53	41.53	....	....
Dam at Sammonsville to dam two miles below Sammonsville	16.44	57.97	....	....
Dam below Sammonsville to mouth of Cayadutta creek	5.06	63.03	63.03	2,155.85

Drainage Areas of Mohawk River and Tributaries — (Concluded).
(From U. S. G. S. topographic maps.)

LIMITS.	AREA IN SQUARE MILES.			
	Place to place.	Sub-total.	Branch total.	Total.
MOHAWK RIVER.				
Mouth of Cayadutta creek to Fultonville bridge..	0.68	....	....	2,156 53
Fultonville bridge to mouth of Schoharie creek...	47.39	....	....	2,203.92
*Schoharie Creek.**				
Source to mouth............................	909.30	....	....	3,113.22
MOHAWK RIVER.				
Mouth of Schoharie creek to mouth of Chuctanunda creek (Amsterdam)..................	31.54	....	....	3,144.76
South Chuctanunda Creek.				
Source to Minaville..........................	22.62	22.62	....	....
Minaville to mouth.........................	10.41	33 03	33.03	3,177.79
North Chuctanunda Creek.				
Source to dam, Amsterdam reservoir............	8.76	8.76	....	....
Dam, Amsterdam reservoir, to Hagaman.......	20.77	29.53	....	....
Hagaman to Rockton.........................	4.11	33.64	....	....
Rockton to mouth...........................	5.58	39.22	39.22	3,217.01
MOHAWK RIVER.				
Amsterdam to Hoffman Ferry.................	43.59	....	....	3,260.60
Hoffman Ferry to Scotia bridge...............	52 44	....	....	3,313 04
Scotia bridge to mouth of Alplaus kill...........	24.37	....	....	3,337.41
Alplaus Kill.				
Source to mouth............................	55.80	....	55.80	3,393.21
MOHAWK RIVER.				
Mouth of Alplaus kill to Rexford Flats dam.....	1.23	....	....	3,394.44
Rexford Flats dam to Vischer's Ferry dam......	10.98	....	....	3,405.42
Vischer's Ferry dam to Dunsbach Ferry dam....	53.20	....	....	3,458.62
Dunsbach Ferry dam to Crescent aqueduct......	10 25	....	....	3,468.87
Crescent aqueduct to Crescent dam............	2 68	....	....	3,471.55
Crescent dam to Cohoes Co's dam.............	0.61	....	....	3,472.16
Cohoes Co's dam to mouth of Mohawk river.....	12.68	....	....	3,484.84

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* For subareas see separate table.

Table showing Drainage Areas used previous to 1910 *in estimating Run-off of Mohawk River and Tributaries at certain Gaging Stations; together with latest determination of these Areas from U. S. Geological Survey Topographic Maps.*

STREAM.	Gaging station.	DRAINAGE AREAS IN SQUARE MILES.	
		Formerly used.	From U. S. G. S. maps.
Mohawk river........	Cohoes dam....................	3,456	3,472.2
	Dunsbach Ferry.................	3,440	3,458.6
	Rexford Flats...................	3,385	3,394.4
	Schenectady, Freemans bridge....	3,321	....
	Scotia bridge.......	....	3,313.0
	Amsterdam.....................	....	3,217.0
	Tribes Hill.....................	....	3,113.2
	Fonda-Fultonville................	....	2,156.5
	Fort Plain......................	....	1,841.9
	Rocky Rift dam.................	1,351	1,340.6
	Little Falls.....................	1,306	1,328.7
	Herkimer......................	....	707.3
	Utica, Black River R. R. bridge...	500	524.8
	Rome, State dam................	148 (1906)	160.0
	Floyd Ave. bridge.........	....	158.2
	Ridge Mills.....................	152.5 (U. S. D. W.)	155.6

Table showing Drainage Areas used previous to 1910 in estimating Run-off of Mohawk River and Tributaries at certain Gaging Stations; together with latest determination of these Areas from U. S. Geological Survey Topographic Maps — (Continued).

STREAM.	Gaging station.	DRAINAGE AREAS IN SQUARE MILES.	
		Formerly used.	From U. S. G. S. maps.
Schoharie creek	Fort Hunter	947	909.3
	Schoharie Falls	930	....
	Middleburg	....	527.4
	Prattsville	243	238.4
Cayadutta creek	Near Johnstown	40	41.5
Garoga creek	Near Fort Plain	80.8	....
East Canada creek	Dolgeville	256	....
West Canada creek	Kast Bridge	574 (1903)	574.8
	Poland	....	470.1
	Middleville	519 (U. S. D. W.)	527.3
	Trenton Falls	375	375.8
	Twin Rock bridge	364	364.4
Sauquoit creek	New York Mills	51.5	50.9
Oriskany creek	State feeder dam	144	146.0
Nine-Mile creek	Stittville, Powell's bridge	62.6	59.1

MOHAWK RIVER WATER-SURFACE ELEVATION RECORDS.

The following tables give records of the mean daily elevation of water-surface of the Mohawk river at different gaging stations for 1912. The elevations are referred to Barge canal datum, which is equivalent to mean tide in New York, taken as elevation 14.73 below the old grist mill bench-mark at Greenbush (Rensselaer).

The tables of elevations of water-surface are arranged in order proceeding upstream from the junction of the Mohawk river with the Hudson river at Waterford, to Delta.

An accompanying table gives details as to the types of gages used, the datum of each and the manner in which they are read.

Water-surface Elevation Gages Maintained on Mohawk River and Tributaries During the Year 1912.

LOCATION.	Date established.	Observer.	Elevation of zero mark (B. C. datum).	Type of gage.	Subdivision of gage.	Readings taken to
Mohawk river:						
Waterford	Jan. 15, 1907	Barge canal employee	0.00	Staff	1/10 foot	1/10 foot
Cohoes	Dec. —, 1903	James Murphy	153.47*a*	"	1/10 "	1/10 "
Dunsbach Ferry, Emerick	Mar. 12, 1898	Robt. Wilson		"	1/10 "	1/10 "
Rexford, above dam	Dec. 8, 1898	J. Reepmeyer, Jr.	208.16	Chain	1/10 "	1/10 "
Schenectady	April 3, 1904	W. C. Vrooman	208.66	Staff	1/10 "	1/10 "
Tribes Hill	Jan. 7, 1904	Clarence Hansen	263.71	Chain	1/10 "	1/10 "
Fultonville	April 29, 1906	Ed. P. Ryan	268.69	"	1/10 "	1/10 "
Canajoharie	Sept. 16, 1908	John J. Lyons	280.45	"	1/10 "	1/10 "
Fort Plain	Dec. 30, 1905	Frank Fayant, Jr.	288.66	"	1/10 "	1/10 "
Indian Castle, above Rocky Rift dam	Jan. 21, 1913	Chas. W. Slingerland	318.00	Staff	1/10 "	1/10 "
Little Falls Paper Co.'s tail-race	1898	C. V. Barrett	320.72	"	Inch	Inch
Little Falls Paper Co.'s head-race	1898	C. V. Barrett	330.92	"	1/10 foot	1/10 foot
Little Falls, Astoronga tail-race	1908	Edw. Haggarty	317.70	"	1/10 "	1/10 "
Little Falls, Astoronga head-race	1908	John M. Burns	332.17	"	Inch	Inch
Little Falls, above State dam	1898	John Stark	360.31	"	1/10 foot	1/10 foot
St. Johnsville, at bridge	Jan. 28, 1913	Barge canal employee	393.00	Chain	1/10 "	1/10 "
Herkimer, Mohawk avenue bridge		Edward P. Walthart	380.00	Staff	1/10 "	1/100 "
Herkimer, Washington street bridge	Feb. 4, 1913	Edward P. Walthart	371.50	Chain	1/10 "	1/10 "
Ilion, at bridge	Jan. 24, 1913	Paul C. Earl	379.00	"	1/10 "	1/100 "
Frankfort, at bridge	Jan. 25, 1913	Clayton G. Morse	378.00	"	1/10 "	1/100 "
Utica	Mar. 15, 1905	W. E. Young	393.14	Staff	1/10 "	1/10 "
Rome, below dam	May 3, 1904	John Phillips	426.46	"	1/10 "	1/10 "
Rome, above dam	"	John Phillips	429.73	"	1/10 "	1/10 "
Rome, Floyd avenue	July 9, 1907	G. G. Williams	445.01	Chain	1/10 "	1/100 "
Ridge Mills, below dam	May 3, 1904	Daniel Brown	456.20	Staff	1/10 "	1/10 "
Ridge Mills, above dam	"	Daniel Brown	465.22	"	1/10 "	1/10 "
Stony creek — Crescent	April 13, 1912	Wm. Jones	*	"	1/10 "	1/10 "
Schoharie creek:						
Fort Hunter	Sept. 24, 1898	H. A. Hockel	277.50	Chain	1/10 "	1/10 "
Central Bridge	April 3, 1904	A. M. Spencer	565.96*b*	"	1/10 "	1/100 "
Middleburg	Aug. 24, 1906	Minnie E. Wheeler	*	Staff	1/10 "	1/100 "
East Canada creek:						
Dolgeville, below dam	1898	Godfrey Aman	*	"	1/10 "	1/100 "
Dolgeville, above dam	1898	Godfrey Aman	*	"	1/10 "	1/100 "
West Canada creek:						
Kast Bridge	May 15, 1904	Lloyd Kast	414.24	Tape	1/100 "	1/100 "
Poland	July 3, 1908	Clarence Fitch	*	Chain	1/10 "	1/10 "
Trenton Falls, Morgan dam	Feb. 8, 1904	Chas. W. Young	751.26*a*	Staff	1/10 "	1/10 "
Trenton Falls, Power Co.'s dam	"	Chas. W. Young	1,009.48	"	Inch	Inch
Grant, Twin Rock bridge	Sept. 7, 1909	Frank McArthur	1,135.07	Tape	1/100 foot	1/100 foot
Near Wilmurt	June 28, 1909	Ray Hubbard	*	Chain	1/10 "	1/10 "
Nine-Mile creek — Stittville	Nov. 4, 1905	Maria Powell	481.72	"	1/10 "	1/10 "

* Arbitrary datum. *a* Weather Bureau datum. *b* U. S. G. S. datum.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River at Waterford, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	15.85	14.35	14.65	20.70	17.15	16.45	14.55	14.55	15.10	15.25	15.70	15.05
2.....	15.70	14.10	14.75	20.95	16.65	15.90	14.85	14.55	15.20	15.15	15.60	15.10
3.....	15.60	14.10	14.35	20.35	16.45	16.20	14.80	14.80	15.30	15.20	15.55	15.00
4.....	15.35	14.10	14.35	19.00	16.30	15.80	14.90	15.25	15.15	15.20	15.75	18.05
5.....	14.95	14.20	14.30	18.55	16.00	15.75	14.70	14.90	14.95	15.05	15.60	17.55
6.....	15.45	14.45	14.20	20.95	16.15	15.60	14.85	14.70	15.00	14.95	15.45	17.00
7.....	15.00	14.25	14.20	21.95	15.85	15.20	14.50	14.85	14.85	14.90	15.55	17.50
8.....	15.00	14.25	14.35	24.15	16.20	15.15	14.20	15.05	14.95	14.75	16.55	17.45
9.....	14.90	14.20	14.45	23.55	15.75	15.00	14.25	15.15	14.95	14.60	19.20	17.05
10.....	14.55	14.20	14.60	21.10	15.80	14.65	14.45	15.10	14.90	14.45	18.60	16.45
11.....	14.85	14.15	14.60	20.25	15.55	14.40	14.70	15.30	14.95	14.55	17.70	16.05
12.....	14.65	14.05	14.60	19.20	15.50	14.40	14.60	15.35	14.75	14.70	17.05	16.05
13.....	14.68	14.20	16.17	18.60	15.25	14.30	14.75	15.20	14.60	15.35	16.75	16.25
14.....	14.60	14.05	17.67	18.85	15.15	14.30	14.75	15.20	14.50	15.15	16.50	15.75
15.....	14.35	14.00	18.70	19.10	15.55	14.15	14.55	15.20	14.55	15.05	16.75	15.25
16.....	14.45	14.10	20.40	19.70	15.40	14.25	14.30	15.10	14.85	15.10	16.75	15.50
17.....	14.25	14.00	18.80	20.85	15.45	14.30	14.45	15.10	15.30	15.05	16.55	15.35
18.....	14.25	14.00	18.83	21.35	16.05	14.25	14.25	15.15	15.40	14.85	16.40	15.45
19.....	14.35	14.00	18.90	21.55	16.60	14.25	14.45	15.30	15.50	14.85	16.05	15.50
20.....	14.45	14.35	19.45	21.35	16.30	14.20	14.15	15.15	15.80	15.10	15.90	16.05
21.....	14.65	14.25	18.90	20.05	16.00	14.05	14.10	15.10	15.50	14.90	15.70	16.50
22.....	14.70	14.40	17.30	19.30	17.15	13.95	14.05	15.20	15.40	15.10	15.65	16.20
23.....	14.75	14.40	16.60	19.15	17.95	14.10	14.25	15.10	15.40	14.95	15.55	16.05
24.....	14.60	14.75	16.75	19.80	17.30	14.05	14.20	15.20	15.30	16.75	15.30	15.95
25.....	14.35	14.75	16.35	19.70	16.85	14.65	14.10	15.20	15.05	18.80	15.80	15.50
26.....	14.30	14.60	15.95	18.75	16.60	14.55	14.30	15.25	16.30	18.55	15.95	15.35
27.....	14.45	14.95	15.55	18.05	16.30	14.05	14.45	15.20	16.35	18.15	15.95	15.30
28.....	14.15	14.90	15.45	17.90	15.85	14.55	15.05	15.05	16.00	17.25	15.65	17.05
29.....	14.05	14.80	17.10	17.80	15.55	15.15	14.95	15.15	15.75	16.65	15.45	15.10
30.....	14.40	......	21.00	17.40	15.95	14.90	14.55	15.20	15.25	16.50	15.40	15.10
31.....	14.10	......	20.30	......	16.30	......	14.40	15.15	......	16.05	......	15.70

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River above Dam at Cohoes, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	157.02	155.97	156.42	159.27	156.72	156.42	154.92	153.87	158.37	159.42	155.87	155.92
2.....	157.17	155.97	156.37	159.07	156.57	156.32	155.97	154.07	159.52	159.47	156.02	154.97
3.....	157.17	156.12	156.57	158.72	156.62	155.87	155.82	156.12	159.47	159.32	156.32	155.87
4.....	156.92	156.32	156.07	157.72	156.52	156.02	156.97	157.67	158.57	159.12	155.97	157.62
5.....	156.62	155.87	156.07	157.52	156.52	156.12	155.82	158.07	158.42	157.47	155.87	157.32
6.....	156.47	155.42	155.97	158.87	156.42	155.92	154.12	155.27	158.62	158.52	155.77	157.02
7.....	156.77	155.87	155.92	158.87	156.37	155.82	157.37	154.77	159.27	156.87	155.27	156.97
8.....	156.72	155.72	155.92	158.97	156.47	155.87	158.97	157.22	159.72	157.47	156.42	157.07
9.....	156.42	155.57	156.07	158.77	156.27	156.12	157.47	156.42	159.42	155.37	158.12	156.87
10.....	156.37	155.97	156.52	158.12	156.22	156.02	155.07	155.67	159.37	154.97	157.72	156.32
11.....	156.42	156.82	156.32	157.87	156.37	155.52	154.87	157.37	159.12	154.67	157.17	156.22
12.....	156.32	155.87	156.32	157.57	156.27	155.42	155.27	158.72	157.57	155.62	156.72	156.32
13.....	156.97	155.22	156.52	157.52	155.97	155.87	152.92	158.17	155.92	159.62	156.42	156.47
14.....	157.12	155.22	156.77	157.77	155.77	155.47	156.52	158.52	154.07	159.02	156.17	156.27
15.....	156.22	155.22	157.02	157.82	155.87	155.37	157.47	158.62	158.92	155.97	156.27	156.72
16.....	156.07	155.17	157.92	158.37	155.92	155.82	156.62	158.47	158.62	157.42	156.52	156.37
17.....	155.92	155.77	158.92	158.52	156.02	155.32	156.22	157.92	159.07	156.12	156.72	156.37
18.....	156.02	155.82	158.22	158.42	156.57	155.87	159.02	159.27	159.52	155.92	156.22	156.47
19.....	156.07	155.02	158.42	158.12	156.67	155.72	158.47	158.27	159.67	154.32	155.97	156.22
20.....	156.17	155.27	158.62	158.32	156.52	155.52	157.72	158.52	159.82	154.57	156.07	156.52
21.....	156.57	155.37	158.42	158.37	156.27	155.42	158.42	158.27	159.77	156.17	156.17	156.92
22.....	156.47	156.02	157.12	158.12	156.57	155.52	158.17	155.97	159.87	156.27	156.02	157.07
23.....	156.27	156.47	157.07	158.02	157.12	155.82	155.22	156.02	159.72	155.67	156.07	156.82
24.....	156.32	156.67	157.02	157.87	156.32	154.72	153.37	157.12	159.52	156.17	156.22	156.52
25.....	156.22	156.82	156.82	157.57	156.42	154.97	153.72	157.42	159.32	157.77	156.17	156.67
26.....	156.17	156.37	156.47	158.12	156.62	153.82	155.07	157.22	160.42	157.77	156.27	156.52
27.....	156.22	156.62	156.32	156.92	156.12	156.62	155.67	153.37	160.12	157.62	156.32	156.87
28.....	156.17	156.57	156.32	157.07	155.92	157.42	158.67	149.27	159.97	156.87	156.47	156.87
29.....	156.02	156.62	156.87	156.97	155.87	157.07	157.42	156.27	159.87	156.72	156.12	156.87
30.....	155.87	......	159.37	156.87	156.27	157.67	156.92	155.47	159.29	156.47	156.12	156.22
31.....	155.87	......	159.02	......	155.87	......	155.87	153.52	......	156.07	......	156.22

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River at Dunsbach Ferry, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	175.98	174.33	175.28	180.03	176.28	175.43	174.13	*a*	*a*	*a*	171.74	171.74
2.....	175.73	174.33	175.23	179.68	176.23	175.48	174.13	*a*	*a*	*a*	171.74	172.04
3.....	175.63	174.33	175.23	179.03	176.38	175.63	174.13	*a*	*a*	*a*	171.64	172.64
4.....	175.33	174.23	175.13	178.28	176.58	175.68	174.13	*a*	*a*	*a*	171.54	174.34
5.....	175.43	174.23	175.13	177.43	176.48	175.58	174.13	*a*	*a*	*a*	171.54	173.84
6.....	175.23	174.23	175.18	179.63	176.13	175.48	174.13	*a*	*a*	*a*	171.34	173.44
7.....	175.23	174.13	175.48	179.98	175.88	175.33	174.13	*a*	*a*	*a*	171.54	173.04
8.....	175.13	174.13	175.83	180.88	175.88	175.13	174.13	*a*	*a*	*a*	172.14	172.84
9.....	175.13	174.08	176.03	179.68	176.03	174.98	174.13	*a*	*a*	*a*	174.64	172.64
10.....	175.08	174.03	176.08	178.48	175.78	174.93	174.13	*a*	*a*	*a*	173.84	172.44
11.....	175.03	174.03	176.13	178.13	175.38	174.83	174.13	*a*	*a*	*a*	173.34	172.34
12.....	175.03	174.08	176.33	177.63	175.28	174.73	174.13	*a*	*a*	*a*	172.94	172.54
13.....	175.03	174.13	176.43	177.43	175.08	174.68	174.13	*a*	*a*	*a*	172.84	172.74
14.....	174.98	174.18	176.53	177.58	175.03	174.63	174.13	*a*	*a*	*a*	172.64	173.04
15.....	174.93	174.23	176.53	178.28	175.23	174.73	174.13	*a*	*a*	171.34	172.44	172.94
16.....	174.93	174.23	180.03	178.93	175.23	174.78	174.13	*a*	*a*	171.29	172.34	172.94
17.....	174.88	174.33	184.13	179.03	175.28	174.83	174.13	*a*	*a*	171.44	171.94	172.94
18.....	174.83	174.33	178.98	178.98	175.48	174.83	*a*	*a*	*a*	171.54	171.94	172.74
19.....	174.83	174.33	178.08	178.93	175.78	174.73	*a*	*a*	*a*	171.79	171.94	172.44
20.....	174.83	174.38	177.83	178.33	176.13	174.73	*a*	*a*	*a*	171.84	171.94	172.34
21.....	174.83	174.43	178.03	177.78	176.03	174.63	*a*	*a*	*a*	172.29	171.74	172.84
22.....	174.73	174.48	177.93	177.38	176.13	174.53	*a*	*a*	*a*	172.89	171.64	172.94
23.....	174.73	174.58	177.38	177.38	176.03	174.48	*a*	*a*	*a*	172.29	171.54	173.44
24.....	174.73	174.83	176.83	177.98	175.93	174.38	*a*	*a*	*a*	172.49	171.54	173.54
25.....	174.73	174.83	176.68	177.63	175.98	174.33	*a*	*a*	*a*	173.79	171.74	173.54
26.....	174.73	174.93	176.58	177.18	175.98	174.28	*a*	*a*	*a*	173.54	172.04	173.34
27.....	174.73	175.13	176.53	176.63	175.73	174.23	*a*	*a*	*a*	172.94	172.04	173.34
28.....	174.53	175.23	176.63	176.43	175.78	174.23	*a*	*a*	*a*	172.64	171.84	173.34
29.....	174.43	175.33	176.93	176.48	175.78	174.18	*a*	*a*	*a*	172.34	171.74	173.34
30.....	174.38	......	179.78	176.48	175.53	174.13	*a*	*a*	*a*	171.94	171.74	173.34
31.....	174.33	......	178.98	......	175.48	......	*a*	*a*	......	171.84	......	173.34

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River above State Dam Rexford, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	210.56	209.56	209.56	214.81	211.16	209.96	209.16	208.66	210.16	210.81	210.96	211.46
2.....	210.46	209.56	209.56	214.41	211.06	209.96	209.16	208.66	210.16	210.66	210.96	211.46
3.....	210.46	209.56	209.56	213.66	210.96	210.21	209.16	208.66	210.06	211.41	210.96	213.91
4.....	210.21	209.56	209.56	212.46	210.86	210.31	209.16	208.66	210.06	211.26	211.06	213.56
5.....	210.11	209.56	209.56	211.61	210.66	210.21	209.16	208.66	210.06	210.66	211.06	212.81
6.....	209.96	209.56	209.56	214.11	210.51	210.06	209.16	208.66	210.16	210.76	211.06	212.01
7.....	209.86	209.56	209.55	213.76	210.36	210.01	209.16	208.66	210.16	210.96	211.06	211.86
8.....	209.86	209.56	209.56	213.56	210.21	209.96	209.16	208.66	210.16	210.91	213.06	211.76
9.....	209.76	209.56	209.56	213.21	210.11	209.96	209.16	208.66	210.16	210.81	214.51	211.76
10.....	209.66	209.56	209.56	212.91	210.06	209.96	209.16	208.66	210.16	210.76	213.26	211.76
11.....	209.66	209.56	209.76	212.56	210.06	209.86	209.16	208.66	210.16	210.96	212.56	211.76
12.....	209.66	209.56	209.86	212.21	210.16	209.86	209.16	208.66	210.16	211.31	212.16	211.66
13.....	209.66	209.56	210.46	212.21	210.76	209.76	209.16	208.66	210.16	211.26	211.71	211.66
14.....	209.66	209.56	211.06	212.51	210.86	209.76	209.16	208.66	210.36	210.96	211.56	211.66
15.....	209.61	209.56	211.51	212.56	210.66	209.66	209.16	208.66	210.31	211.26	211.71	211.66
16.....	209.56	209.56	215.51	212.46	210.41	209.61	209.16	208.66	210.16	210.96	211.71	211.66
17.....	209.56	209.56	213.56	213.51	210.21	209.51	209.16	208.66	210.16	210.86	211.66	211.66
18.....	209.56	209.56	212.66	213.31	210.21	209.41	209.16	208.66	210.16	210.86	211.46	211.66
19.....	209.56	209.56	212.66	213.31	210.41	209.36	209.16	208.66	210.16	210.86	211.46	212.06
20.....	209.56	209.56	212.16	212.91	211.36	209.26	209.16	208.66	210.21	210.86	211.36	212.66
21.....	209.56	209.56	211.81	212.61	211.26	209.16	209.16	208.66	210.36	211.36	211.26	212.21
22.....	209.56	209.56	211.46	212.31	211.11	209.16	209.16	208.66	210.66	210.86	211.26	211.96
23.....	209.56	209.56	211.16	212.11	210.96	209.11	209.06	208.66	210.21	211.06	211.51	211.66
24.....	209.56	209.56	211.56	211.86	210.71	209.06	208.96	208.66	210.21	212.31	211.76	211.41
25.....	209.51	209.56	210.86	211.66	210.46	209.11	208.96	208.66	211.16	213.76	211.66	211.36
26.....	209.56	209.56	210.76	211.46	210.21	209.26	208.96	208.66	212.64	213.46	211.81	211.26
27.....	209.56	209.56	210.26	211.36	210.06	209.16	208.96	208.66	212.26	212.86	211.76	211.16
28.....	209.56	209.56	211.81	211.36	209.96	209.16	208.96	208.66	211.71	212.41	211.66	211.16
29.....	209.56	209.56	212.61	211.26	209.86	209.16	208.96	208.66	211.01	212.11	211.55	211.16
30.....	209.56	......	214.51	211.16	209.86	209.16	208.96	208.66	210.31	211.46	211.56	211.16
31.....	209.56	......	214.26	......	210.06	......	208.96	208.66	......	211.11	......	211.16

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River at Schenectady, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	211.16	210.06	210.06	219.51	212.26	210.56	209.66	209.56	209.41	211.31	211.36	211.21
2.....	211.16	210.06	210.06	217.91	211.76	210.26	209.66	209.56	209.66	211.21	211.31	210.16
3.....	210.86	210.06	210.06	216.86	211.66	210.06	209.66	209.56	209.86	211.66	211.26	214.26
4.....	210.86	210.06	210.06	214.51	211.46	210.41	209.56	209.56	209.71	211.56	211.51	215.01
5.....	210.86	210.06	210.06	213.91	211.06	210.36	209.56	209.56	210.01	211.26	211.16	213.81
6.....	210.86	210.06	210.06	218.16	211.06	210.01	209.56	209.61	210.46	210.91	211.01	213.16
7.....	210.86	210.06	210.06	218.56	211.56	209.66	209.56	209.81	210.56	210.51	210.86	213.91
8.....	210.76	210.06	210.06	220.16	211.41	209.26	209.56	209.86	210.66	210.51	214.16	213.61
9.....	210.76	210.06	210.16	217.56	211.06	209.96	209.56	209.86	210.76	210.36	215.01	212.86
10.....	210.66	210.06	210.66	214.96	210.66	209.81	209.56	209.86	210.41	210.26	214.16	212.26
11.....	210.61	210.06	210.66	214.81	210.51	209.56	209.56	209.86	210.21	210.11	213.06	211.86
12.....	210.46	210.06	210.66	213.51	210.31	209.51	209.56	209.81	209.66	211.06	212.21	211.86
13.....	210.26	210.06	210.66	213.61	210.11	209.46	209.46	209.66	209.56	211.76	212.16	211.86
14.....	210.06	210.06	211.31	214.16	209.91	209.51	209.56	209.86	209.91	211.56	211.96	211.86
15.....	210.06	210.06	211.66	215.06	210.11	209.51	209.56	209.86	210.21	211.26	212.26	211.66
16.....	210.06	210.06	219.46	216.01	210.01	209.56	209.66	209.86	210.16	211.21	212.51	211.86
17.....	210.06	210.06	214.16	216.81	210.31	209.56	209.56	209.66	210.41	211.36	212.16	211.96
18.....	210.06	210.06	214.36	216.36	211.51	209.56	209.66	209.66	211.61	210.61	211.66	211.66
19	210.06	210.06	215.21	216.51	211.41	209.51	209.66	209.66	211.16	210.41	211.26	211.66
20.....	210.06	210.06	216.66	215.86	211.31	209.46	209.66	209.66	211.41	210.91	211.61	213.41
21	210.06	210.06	215.01	214.06	211.41	209.41	209.66	209.66	211.51	212.01	211.66	213.21
22.....	210.06	210.06	212.96	212.51	212.76	209.31	209.66	209.66	211.06	210.96	211.46	211.76
23.....	210.06	210.06	212.46	213.96	212.46	209.26	209.56	209.66	210.91	211.16	211.31	212.36
24.....	210.06	210.06	211.96	215.46	212.51	209.16	209.66	209.56	210.56	212.86	211.21	211.96
25.....	210.06	210.06	211.56	213.86	211.41	209.36	209.66	209.46	211.96	214.96	211.56	211.56
26....	210.06	210.06	211.16	212.91	210.51	209.61	209.66	209.46	213.31	214.61	212.16	211.31
27.....	210.06	210.06	210.66	212.31	210.06	209.66	209.66	209.41	212.71	214.11	212.11	211.06
28.....	210.06	210.06	210.66	212.26	209.96	209.66	209.56	209.36	212.21	212.71	211.96	211.16
29.....	210.06	210.06	212.91	212.71	209.76	209.66	209.56	210.26	211.16	212.51	211.61	211.26
30.....	210.06	......	218.31	212.41	209.86	209.66	209.56	209.61	210.86	212.01	211.36	211.16
31.....	210.06	......	216.46	......	211.26	......	209.56	209.41	......	211.66	......	211.71

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River at Tribes Hill, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	269.71	267.11	267.91	274.01	271.16	269.66	268.01	267.71	267.91	268.81	268.76	268.61
2.....	269.91	267.11	267.71	275.71	271.11	269.71	268.01	267.71	267.91	268.81	268.71	269.16
3.....	269.71	267.01	267.71	273.71	270.76	269.71	268.01	267.81	267.91	268.91	268.81	273.01
4.....	269.51	267.01	267.71	273.01	270.31	269.71	268.01	267.81	268.01	268.81	268.91	271.61
5.....	269.21	267.01	267.91	273.01	270.16	269.41	268.01	267.81	268.16	268.71	268.91	271.16
6.....	269.01	266.91	267.91	274.01	270.31	269.21	267.96	267.81	268.31	268.61	268.76	271.26
7.....	268.91	266.91	268.11	275.51	270.21	269.11	267.86	267.81	268.41	268.51	268.71	271.61
8.....	268.81	266.91	268.11	276.51	270.01	269.01	267.81	267.81	268.46	268.26	272.11	271.16
9.....	268.71	266.81	268.11	274.36	269.66	268.91	267.81	267.96	268.46	268.21	272.76	269.86
10.....	268.61	266.81	268.11	273.36	269.46	268.71	267.81	267.91	268.31	268.16	270.61	269.46
11.....	268.51	266.81	268.11	273.11	269.41	268.71	267.81	267.91	268.31	268.11	270.26	269.86
12.....	268.31	266.81	268.31	272.81	269.31	268.76	267.81	267.96	268.21	268.21	269.86	269.86
13.....	268.21	266.81	269.31	272.41	269.21	268.71	267.81	268.16	268.11	268.16	269.61	269.11
14.....	268.21	266.71	270.51	272.66	269.01	268.66	267.81	268.31	268.11	268.21	269.91	268.96
15.....	268.11	266.71	271.71	273.21	269.01	268.71	267.91	268.26	268.31	268.16	270.26	269.06
16.....	268.11	266.71	274.71	274.21	269.11	268.61	267.91	268.11	268.51	268.21	269.71	269.11
17.....	268.01	266.71	272.86	274.56	270.01	268.61	267.91	268.01	269.41	268.21	269.61	269.26
18.....	268.01	266.71	272.91	274.16	270.91	268.61	267.91	268.01	269.31	268.21	269.36	269.21
19.....	267.91	266.71	273.26	273.51	270.61	268.61	267.91	268.01	268.71	268.31	269.21	269.46
20.....	267.91	266.71	274.01	273.41	270.21	268.51	267.91	268.11	269.01	269.06	269.31	270.01
21.....	267.81	267.01	273.41	272.61	270.31	268.36	267.91	268.16	269.31	269.41	269.26	270.16
22.....	267.71	267.31	271.26	272.71	270.71	268.26	267.91	268.16	269.21	269.06	269.26	270.11
23.....	267.71	267.31	271.51	273.06	270.56	268.21	267.86	267.96	269.01	269.21	269.31	269.91
24.....	267.61	267.31	271.21	273.31	270.41	268.21	267.86	267.81	269.01	270.46	269.36	269.76
25.....	267.41	267.31	270.61	272.61	270.16	268.16	267.91	267.96	270.16	271.86	269.81	269.56
26.....	267.41	267.31	270.21	272.21	269.81	268.11	267.91	268.01	270.76	271.71	269.71	269.26
27.....	267.31	267.91	269.76	271.61	269.76	268.06	267.91	268.01	270.31	271.36	269.41	269.26
28.....	267.31	267.91	271.01	271.11	269.86	268.01	267.91	268.01	269.61	270.46	269.21	269.31
29.....	267.31	267.91	272.91	271.36	269.81	268.01	267.86	267.91	269.11	269.86	269.06	269.56
30.....	267.21	......	275.51	271.61	269.71	268.01	267.81	267.91	268.91	269.36	269.01	270.01
31.....	267.11	......	275.21	......	269.96	......	267.71	267.91	......	268.81	......	270.56

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Schoharie Creek at Fort Hunter, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	281.90	280.80	281.70	283.75	282.20	281.70	279.05	278.30	279.75	280.55	281.85	281.80
2.....	281.85	280.80	281.55	283.80	282.15	281.65	278.95	278.30	279.70	280.50	281.70	282.05
3.....	281.80	280.80	281.50	283.45	282.10	281.70	278.85	278.50	279.85	280.55	281.85	283.65
4.....	281.70	280.80	281.50	283.10	282.10	281.75	278.65	278.65	280.60	280.45	281.65	283.40
5.....	281.55	280.70	281.50	283.10	281.95	281.75	278.65	278.55	280.90	279.40	281.65	283.25
6.....	281.30	280.70	281.40	283.65	281.95	281.65	278.70	278.40	281.05	279.10	281.70	283.05
7.....	281.20	280.70	281.40	284.15	282.15	281.60	278.70	278.30	281.05	279.00	281.65	282.85
8.....	281.20	280.70	281.40	284.15	281.95	281.60	278.70	278.25	279.55	278.95	282.80	282.45
9.....	281.10	280.60	281.45	284.45	281.80	281.60	278.70	278.20	279.05	278.90	282.60	282.30
10.....	281.05	280.50	281.65	283.65	281.80	281.60	278.70	278.45	279.00	278.90	282.35	282.20
11.....	281.00	280.50	281.65	283.05	281.80	281.50	278.60	278.65	278.90	279.05	282.20	282.10
12.....	281.00	280.50	281.50	282.85	281.80	281.45	278.60	278.65	278.90	280.25	281.95	282.00
13.....	280.90	280.50	281.70	282.80	281.65	281.35	278.60	281.40	278.80	281.15	281.85	281.90
14.....	280.80	280.50	283.40	282.80	281.75	281.30	279.50	280.80	278.95	281.90	281.90	281.90
15.....	280.80	280.40	283.50	281.80	281.80	281.05	279.30	279.93	279.25	281.60	281.95	281.80
16.....	280.80	280.40	286.75	283.35	281.85	280.85	279.05	279.50	279.50	281.15	281.85	281.80
17.....	280.70	280.40	283.65	284.45	282.30	280.70	278.85	279.15	281.30	280.30	281.80	281.70
18.....	280.70	280.30	283.15	283.90	282.45	280.50	278.65	279.00	281.70	279.85	281.75	281.70
19.....	280.70	280.30	283.20	283.55	282.30	280.25	278.35	278.90	281.55	279.60	281.65	281.90
20.....	280.60	280.30	283.20	283.15	282.10	280.10	278.20	279.20	281.50	279.95	281.90	282.15
21.....	281.85	280.45	283.00	282.70	281.90	280.00	278.85	279.25	281.40	279.80	281.80	282.15
22.....	281.95	280.65	282.80	282.70	281.95	279.85	278.95	279.05	281.30	279.70	281.75	281.95
23.....	281.85	280.90	282.40	282.65	282.00	279.75	278.75	279.30	281.05	279.65	281.70	281.85
24.....	281.80	281.00	282.25	282.60	281.85	279.60	278.70	279.30	280.90	282.20	281.75	281.70
25.....	281.70	281.25	282.10	282.50	281.80	279.30	278.70	279.25	281.40	283.65	282.05	281.65
26.....	281.55	281.35	282.00	282.45	281.80	278.95	278.70	279.30	282.60	282.85	282.10	281.55
27.....	281.45	281.65	282.00	282.25	281.70	278.95	278.60	280.45	282.20	282.15	282.00	281.40
28.....	281.35	281.70	281.95	282.05	281.60	279.05	278.50	279.80	281.45	282.00	281.95	281.30
29.....	281.30	281.70	281.95	281.85	281.60	279.10	278.55	279.05	280.75	281.90	281.90	281.25
30.....	281.15	......	284.15	281.80	281.60	279.10	278.45	279.05	280.45	281.85	281.80	281.45
31.....	280.95	......	283.40	......	281.65	......	278.35	279.40	......	281.75	......	282.45

Mean Daily Elevation of Water-surface (U. S. G. S. Datum) of Schoharie Creek at Schoharie Junction, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	568.54	568.78	570.91	573.96	569.11	568.34	566.71	566.56	566.91	567.26	568.21	568.16
2.....	568.51	568.76	569.86	573.86	569.08	568.24	566.71	566.56	567.01	567.24	568.16	571.86
3.....	568.51	568.76	569.61	573.21	568.81	568.11	566.71	566.56	567.01	567.14	568.21	570.06
4.....	568.64	568.71	569.48	571.31	568.68	567.98	566.68	566.54	567.06	567.11	568.08	569.81
5.....	568.81	568.71	569.36	571.96	568.64	567.96	566.66	566.51	567.06	567.11	568.06	569.51
6.....	569.51	568.68	569.74	573.01	568.91	567.91	566.66	566.51	567.06	567.16	568.06	570.36
7.....	569.34	568.66	569.31	572.81	568.64	567.88	566.68	566.48	567.06	567.14	568.06	569.61
8.....	569.28	568.64	569.26	573.81	568.58	567.81	566.68	566.46	567.06	567.14	569.96	569.31
9.....	569.36	568.61	571.41	571.61	568.48	567.81	566.78	566.46	567.04	567.06	569.96	569.06
10.....	569.34	568.61	571.76	571.26	568.44	567.76	566.78	566.46	567.01	566.96	569.21	568.81
11.....	569.24	568.56	570.76	570.91	568.34	567.68	566.78	567.81	567.01	566.96	568.81	568.68
12.....	569.14	568.56	570.36	571.11	568.21	567.64	566.78	568.06	567.01	567.06	568.64	568.58
13.....	569.04	568.56	575.46	570.86	568.08	567.58	566.76	567.41	567.01	567.71	568.61	568.48
14.....	568.94	568.51	573.41	570.46	568.08	567.54	566.76	567.28	567.01	567.36	568.58	568.38
15.....	568.84	568.51	573.71	570.58	567.98	567.46	566.74	567.14	566.96	567.16	568.54	568.28
16.....	568.76	568.51	577.96	572.91	568.36	567.41	566.74	567.01	567.46	567.11	568.48	568.18
17.....	568.76	568.51	572.46	572.81	568.46	567.34	566.66	566.96	567.46	567.11	568.41	568.11
18.....	568.76	568.51	572.51	572.51	569.51	576.26	566.66	566.91	567.38	567.06	568.48	568.06
19.....	568.86	568.51	572.01	572.04	569.01	567.21	566.64	566.86	567.34	567.01	568.16	568.16
20.....	570.06	568.58	570.91	571.44	568.86	567.14	566.64	566.86	567.61	566.98	568.08	568.66
21.....	569.78	568.66	570.54	570.46	568.91	567.06	566.64	566.86	567.24	566.96	568.06	568.41
22.....	569.51	570.76	570.36	570.21	569.14	566.98	566.64	566.96	567.11	566.96	567.91	568.36
23.....	569.38	571.71	569.76	569.86	569.41	566.96	566.61	567.06	567.06	567.06	567.76	568.26
24.....	569.24	571.46	569.26	569.54	568.71	566.94	566.61	567.18	567.21	570.51	567.76	568.26
25.....	569.11	572.16	569.01	569.28	568.51	566.91	566.61	567.26	567.46	570.86	568.71	568.26
26.....	569.04	572.61	568.81	569.14	568.41	566.86	566.58	567.26	567.46	570.51	568.54	568.24
27.....	568.94	572.36	568.71	568.91	568.34	566.84	566.58	567.18	567.46	569.61	568.44	568.31
28.....	568.88	572.21	568.86	568.84	568.11	566.81	566.58	567.14	567.38	569.06	568.34	568.36
29.....	568.86	572.08	573.41	568.81	568.11	566.78	566.56	567.04	567.34	568.74	568.24	568.36
30.....	568.86	......	574.31	569.34	568.41	566.78	566.56	566.94	567.34	568.41	568.14	568.36
31.....	568.81	......	574.26	......	568.44	......	566.56	566.86	......	568.26	......	568.36

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River at Fultonville Bridge, Fonda, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	279.09	277.19	276.84	280.69	277.59	275.69	273.94	273.39	273.49	275.19	275.14	274.04
2.....	278.79	277.19	276.94	280.24	277.64	275.69	273.69	273.49	273.69	275.09	275.04	274.59
3.....	278.14	277.04	276.99	280.29	277.69	275.94	273.69	273.59	273.69	274.99	274.94	279.89
4.....	277.94	276.84	276.79	279.89	276.94	276.19	273.59	273.69	274.19	274.89	274.89	279.99
5.....	277.69	276.64	276.69	279.89	276.69	275.54	273.59	273.69	274.09	274.79	274.89	279.69
6.....	277.64	276.44	276.54	*a*	276.69	275.19	273.49	273.79	274.69	274.69	274.79	279.04
7.....	277.49	276.24	276.19	*a*	277.49	275.19	273.49	273.89	274.69	274.69	277.34	278.44
8.....	277.19	276.04	276.29	*a*	277.39	275.19	273.39	273.79	274.69	274.69	280.09	278.19
9.....	277.19	275.84	276.09	*a*	276.99	274.44	273.49	273.69	273.89	275.24	279.59	278.19
10.....	277.19	275.69	276.09	*a*	276.59	274.24	273.49	273.69	274.04	274.19	278.99	277.69
11.....	277.19	275.69	276.09	*a*	276.04	274.79	273.49	273.69	273.64	273.69	278.14	276.94
12.....	277.19	275.69	276.09	*a*	275.29	274.69	273.59	273.69	273.74	273.69	277.09	276.04
13.....	277.19	275.69	*a*	*a*	274.79	274.69	273.59	273.69	273.89	275.69	276.69	275.14
14.....	277.19	275.69	*a*	*a*	274.69	274.84	273.59	273.69	273.99	275.14	277.34	275.09
15.....	277.19	275.69	*a*	*a*	274.69	274.69	273.69	273.69	273.69	274.84	277.29	276.69
16.....	277.19	275.69	*a*	*a*	274.94	274.74	273.69	273.79	273.69	274.69	274.84	276.89
17.....	277.19	275.69	*a*	*a*	276.29	274.44	273.69	273.89	275.69	274.44	276.29	276.44
18.....	277.19	275.69	*a*	*a*	277.54	275.14	273.69	273.89	275.24	274.14	276.09	276.49
19.....	277.19	275.69	*a*	*a*	276.84	274.84	273.69	273.79	274.94	273.94	276.19	277.94
20.....	277.19	275.69	*a*	*a*	276.94	274.69	273.79	273.69	275.19	275.29	276.09	277.94
21.....	277.19	275.69	*a*	*a*	277.14	274.64	273.69	273.69	275.34	275.29	275.74	277.69
22.....	277.19	275.69	*a*	*a*	279.69	274.39	273.69	274.09	274.89	275.34	275.19	277.44
23.....	277.19	275.69	*a*	*a*	278.99	274.04	273.69	274.69	274.79	275.59	275.19	277.09
24.....	277.19	275.94	*a*	*a*	277.54	273.89	273.69	273.49	274.69	276.79	274.99	276.89
25.....	277.19	276.14	*a*	*a*	276.39	273.79	273.69	273.49	277.74	279.44	274.89	276.59
26.....	277.19	276.34	*a*	280.44	275.99	273.79	273.69	273.49	276.59	279.19	276.19	276.44
27.....	277.19	276.54	*a*	279.44	275.69	273.79	273.69	273.59	274.79	278.09	276.19	276.34
28.....	277.19	276.74	*a*	278.44	275.69	273.89	273.59	273.69	275.19	277.54	275.99	276.24
29.....	277.19	276.69	*a*	278.44	275.69	273.94	273.49	273.69	275.49	276.69	275.89	276.04
30.....	277.19	......	*a*	278.24	275.69	274.14	273.49	273.69	275.19	276.44	275.24	275.89
31.....	277.19	......	*a*	......	275.79	......	273.39	273.69	......	275.34	......	275.89

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River at Canajoharie, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	289.45	284.55	285.55	301.20	287.40	286.55	286.10	286.10	286.15	......	285.95	285.70
2.....	288.45	284.55	285.55	292.55	287.15	286.55	286.15	286.05	286.05	......	286.20	288.10
3.....	287.70	284.55	285.45	290.85	287.00	286.45	286.15	285.95	286.15	......	286.15	287.70
4.....	287.05	284.45	285.50	289.00	286.20	286.35	286.05	285.85	286.00	......	285.95	287.25
5.....	286.45	284.45	285.35	288.80	286.25	286.05	286.00	286.00	286.05	......	286.10	286.45
6.....	285.80	284.45	285.15	292.85	286.15	285.80	285.90	285.95	286.00	......	286.00	285.85
7.....	285.65	284.45	285.15	295.15	287.15	286.85	285.45	285.95	286.05	......	286.05	285.45
8.....	285.50	284.45	285.05	290.75	286.55	286.25	285.85	285.75	286.15	......	290.50	284.95
9.....	285.95	284.45	285.05	293.10	286.10	286.00	285.40	285.95	285.35	......	289.55	284.95
10.....	285.95	284.45	284.95	290.85	286.05	285.50	285.25	285.95	285.85	......	287.55	284.90
11.....	285.50	284.45	284.90	289.60	285.90	285.95	285.45	286.00	286.10	......	286.70	284.35
12.....	285.35	284.45	284.85	288.65	286.05	286.00	284.05	285.95	286.05	......	286.25	284.20
13.....	285.35	285.45	284.90	288.90	285.65	285.95	284.60	286.05	286.05	......	286.00	284.95
14.....	285.25	284.45	285.75	290.95	285.65	285.90	285.25	285.95	286.05	......	285.95	284.40
15.....	285.25	284.45	285.85	291.40	284.95	286.20	285.30	285.85	286.05	......	285.90	284.05
16.....	285.25	284.45	290.05	292.85	285.25	285.95	286.00	285.95	286.05	......	285.75	284.90
17.....	284.95	284.35	290.25	293.80	286.30	286.00	285.95	286.00	287.45	286.15	285.15	283.20
18.....	284.70	284.35	290.90	293.15	287.10	285.85	286.00	285.85	286.20	286.10	284.90	282.25
19.....	284.95	284.45	293.10	293.70	286.85	285.90	285.80	286.10	286.15	286.05	285.00	282.35
20.....	285.20	284.45	295.20	291.25	286.00	285.75	285.45	286.15	286.75	286.45	285.05	284.30
21.....	285.25	284.75	293.00	289.10	287.75	285.60	285.45	285.90	286.25	286.40	284.90	283.75
22.....	285.25	284.75	291.15	288.65	289.65	285.95	285.75	284.85	286.15	286.25	284.95	283.20
23.....	285.05	285.05	290.50	291.80	288.15	286.00	285.95	284.85	286.00	286.15	285.05	282.40
24.....	285.05	285.10	289.55	292.15	286.90	286.05	285.90	284.95	286.15	286.25	284.85	281.85
25.....	285.05	284.95	288.50	289.65	286.60	285.90	286.05	286.05	287.10	287.35	284.95	281.75
26.....	284.95	284.95	287.70	288.35	286.30	285.95	285.90	286.10	287.50	286.95	284.90	281.45
27.....	284.95	285.45	287.05	288.05	286.05	285.60	285.80	286.05	286.85	286.05	284.80	281.50
28.....	284.95	285.85	287.35	288.85	286.15	285.50	285.80	286.15	......	286.10	283.45	281.35
29.....	284.95	285.75	292.35	288.35	286.20	285.45	286.05	286.15	......	285.95	282.90	281.40
30.....	284.80	......	300.15	287.90	286.40	285.55	286.05	286.05	......	286.00	283.00	281.70
31.....	284.65	......	300.70	......	287.00	......	286.00	286.15	......	285.75	......	283.05

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River at Fort Plain, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	294.71	293.16	293.96	*a*	295.66	294.01	291.11	290.66	290.71	293.01	292.56	292.91
2.....	294.51	293.06	293.61	300.01	295.26	293.76	290.96	290.66	291.01	294.21	292.76	294.26
3.....	294.21	293.06	293.26	298.76	294.91	294.01	291.06	290.76	290.96	293.51	293.26	298.66
4.....	294.11	293.06	293.21	297.01	294.96	294.21	291.06	290.76	291.81	293.16	293.16	298.06
5.....	293.91	292.69	293.01	297.46	294.71	293.81	290.91	291.56	291.96	293.01	292.76	296.11
6.....	293.96	292.96	292.86	299.71	294.71	293.21	290.96	291.16	292.36	292.86	292.66	296.16
7.....	293.91	292.86	292.86	*a*	295.26	293.81	291.01	290.86	291.86	292.56	293.26	296.31
8.....	293.86	292.76	293.01	*a*	294.66	293.31	290.96	290.86	292.31	292.21	298.81	295.96
9.....	293.86	292.71	293.31	299.81	294.21	293.06	290.91	290.76	290.86	292.06	299.06	294.61
10.....	293.86	292.56	293.46	298.16	294.11	293.16	290.91	290.76	290.76	292.01	296.41	294.26
11.....	293.91	292.41	293.21	297.66	293.76	292.96	290.96	290.96	290.96	293.61	294.76	294.11
12.....	293.71	292.36	293.16	296.66	293.31	292.76	290.86	291.06	291.01	293.16	294.26	294.01
13.....	293.66	292.26	293.21	296.21	293.11	292.66	290.86	291.01	290.96	293.26	293.81	293.76
14.....	293.66	292.26	293.26	297.06	293.66	292.56	290.96	290.96	290.96	293.51	294.21	293.71
15.....	293.66	292.41	293.66	298.86	293.31	292.71	290.76	290.86	290.81	293.03	294.86	293.66
16.....	293.66	292.56	296.06	300.06	293.21	292.76	291.71	290.91	291.36	292.66	294.56	293.86
17.....	293.66	292.66	297.01	300.51	294.86	293.16	291.06	290.96	293.76	292.16	293.96	293.91
18.....	293.66	292.66	297.81	300.16	295.41	292.91	290.86	290.96	292.31	292.01	294.21	293.71
19.....	293.66	292.81	300.86	299.26	294.96	292.56	291.06	290.76	292.86	293.46	294.21	294.36
20.....	293.86	292.91	300.86	297.86	294.21	291.71	290.91	290.66	293.61	293.91	293.36	295.96
21.....	294.41	293.01	299.71	297.11	295.41	291.71	290.76	292.56	292.76	292.21	293.46	295.76
22.....	294.26	293.11	297.96	296.96	297.21	291.41	290.76	290.86	292.36	292.76	293.26	295.06
23.....	294.11	293.76	297.01	298.16	295.91	291.71	290.76	290.86	292.16	294.21	293.16	294.71
24.....	293.96	293.91	296.11	299.36	295.11	291.36	291.01	290.86	293.56	295.01	293.06	294.66
25.....	293.86	294.01	294.96	297.51	294.46	291.26	291.01	290.61	295.91	296.46	293.26	294.21
26.....	293.71	294.06	294.31	296.31	293.86	291.21	290.91	290.86	295.71	296.01	294.06	293.91
27.....	293.36	293.96	294.26	296.16	293.56	291.16	290.81	290.96	293.91	294.81	293.91	293.76
28.....	293.16	294.06	294.31	296.76	293.06	291.06	290.71	290.86	293.31	294.76	293.71	293.71
29.....	293.16	294.11	297.76	296.16	293.26	291.06	290.71	290.86	292.56	293.56	293.36	293.41
30.....	293.16	......	*a*	296.01	294.01	291.01	290.71	290.76	293.56	292.56	293.16	293.86
31.....	293.11	......	*a*	......	294.86	......	290.76	290.76	......	292.86	......	295.11

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River above State Dam at Little Falls, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	365.18	363.98	364.58	368.18	365.18	365.08	364.28	364.01	363.71	364.51	364.11	363.91
2.....	365.13	363.98	364.58	367.93	365.08	364.98	364.28	364.01	364.01	365.06	364.11	364.26
3.....	364.98	363.98	364.58	366.78	365.08	364.98	364.18	364.11	364.01	365.01	364.21	365.96
4.....	364.88	363.98	364.58	366.13	364.98	365.03	364.38	364.31	364.01	364.76	364.21	365.56
5.....	364.78	363.98	364.48	365.98	364.98	364.88	364.38	364.31	364.31	364.71	364.11	365.11
6.....	364.48	363.98	364.38	367.18	364.78	364.68	364.38	364.31	364.51	364.71	364.11	365.11
7.....	364.28	363.98	364.28	369.08	364.68	364.68	364.28	364.11	364.41	364.21	364.11	365.36
8.....	364.28	363.98	364.28	369.53	364.78	364.48	364.18	363.91	364.31	363.71	366.41	365.21
9.....	364.28	363.98	364.28	368.28	364.83	364.48	364.08	363.91	364.21	363.71	366.21	365.01
10.....	364.18	363.98	364.28	366.63	364.48	364.38	363.88	364.21	364.21	363.71	365.21	364.81
11.....	364.18	363.98	364.28	366.13	364.38	364.38	363.88	364.31	364.01	363.81	364.81	364.61
12.....	364.18	363.98	364.28	365.88	364.18	364.38	364.08	364.31	363.91	364.31	364.46	364.51
13.....	364.18	363.98	364.28	365.83	364.18	364.28	364.28	364.21	363.91	364.31	364.31	364.51
14.....	364.18	363.98	364.18	366.28	364.18	364.28	364.28	364.21	364.11	364.31	364.11	364.51
15.....	364.18	363.98	364.48	366.93	364.38	364.28	364.08	364.21	364.11	364.31	364.41	364.51
16.....	364.18	363.98	365.38	367.83	364.38	364.48	364.48	364.11	364.11	364.11	364.56	364.51
17.....	364.18	363.98	365.78	368.23	364.48	364.28	364.38	364.11	365.11	364.01	364.51	364.41
18.....	364.18	363.98	366.08	367.58	365.08	364.28	364.38	364.11	364.61	364.01	364.31	364.66
19.....	364.18	364.28	366.63	367.53	364.83	364.08	364.38	364.01	364.76	363.81	364.21	365.16
20.....	364.18	364.38	366.93	366.98	364.58	364.08	364.38	364.01	364.81	364.71	364.11	365.31
21.....	364.18	364.58	366.28	365.88	365.18	363.93	364.38	364.01	364.81	364.61	364.21	365.16
22.....	364.18	364.58	365.78	365.78	366.03	363.88	364.38	363.91	364.56	364.31	364.21	364.86
23.....	364.18	364.58	365.48	368.08	365.43	363.88	364.48	364.01	364.41	364.11	364.21	364.61
24.....	364.08	364.58	364.98	367.13	364.98	363.88	364.48	364.01	364.91	364.61	364.21	364.61
25.....	364.08	364.68	364.78	365.93	364.58	364.48	364.48	364.01	365.71	365.71	364.21	364.51
26.....	364.08	364.68	364.38	365.48	364.48	364.43	364.28	364.01	365.71	365.71	364.21	364.66
27.....	364.08	364.68	364.48	365.68	364.28	364.28	364.28	364.01	365.21	365.51	364.21	364.51
28.....	364.08	364.68	364.68	365.93	363.98	364.28	364.28	364.01	364.71	364.81	364.21	364.41
29.....	363.98	364.68	366.13	365.48	364.28	364.28	364.28	364.01	364.61	364.76	364.16	364.41
30.....	363.98	......	366.98	365.38	365.03	364.38	364.18	363.71	364.51	364.51	363.91	364.21
31.....	363.98	......	367.33	......	365.28	......	364.18	363.21	......	364.11	......	364.71

Mean Daily Elevation of Water-surface (Barge Canal Datum) of West Canada Creek at Kast Bridge, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	443.68	443.72	443.78	446.12	444.74	444.03	442.12	442.36	442.14	443.52	443.33	443.04
2.....	443.56	443.68	443.86	445.94	444.55	443.95	442.26	442.31	442.25	444.16	443.76	443.20
3.....	443.48	443.67	443.69	445.00	444.54	443.86	442.28	442.48	442.26	443.60	443.81	446.42
4.....	443.17	443.80	443.75	444.62	444.43	443.64	442.33	442.60	442.30	443.50	443.51	445.72
5.....	442.88	443.81	443.62	445.07	444.36	443.48	442.37	442.67	442.96	443.50	443.42	444.84
6.....	442.74	443.60	443.59	446.52	444.46	443.42	442.28	442.38	442.89	443.22	443.34	445.14
7.....	442.81	444.08	443.58	448.02	444.82	443.22	442 23	442.36	443.12	443.07	443.97	445.00
8.....	443.02	443.77	443.54	447.63	444.59	443.12	442.10	442.39	442.80	442.94	447.44	444.70
9.....	443.00	443.95	443.81	446.56	444.41	443.06	442.23	442.26	442.63	442.82	446.57	443.88
10.....	442.84	443.74	443.73	445.74	444.04	442.86	442.36	442.32	442.40	442.87	445.26	443.76
11.....	443.01	443.88	443.76	445.27	443.71	442.84	442.14	442.36	442.26	442.97	444.48	443.75
12.....	443.04	444.02	443.64	444.82	443 61	442.86	442.08	442.68	442.44	443.20	444.12	443.50
13.....	443.00	443.79	443.78	445.21	443.76	442.78	442 18	442.62	442.46	443.44	443.94	442.94
14.....	442.98	443.80	*a*	445.76	444.01	442.71	442.33	442.46	442.40	443.54	444.44	443.26
15.....	443.18	443.60	*a*	446.60	443.69	442.64	442.91	442.34	442.47	443.32	444.52	443.20
16.....	443.10	443.40	445.82	447.83	443.80	442.66	442.80	442.42	443.82	443.12	444.35	443.30
17.....	443.11	443.86	445.73	448.12	444.47	442.76	442.28	442.52	443.96	442.95	444.00	443.18
18.....	443.28	443.68	444.71	447.48	444.84	442.75	442.31	442.58	443.23	442.94	443.84	443.22
19.....	443.76	443.52	445.12	447.50	444.67	442.57	442.25	442.18	443.81	443.30	443.49	445.02
20.....	443.92	444.12	445.42	446.60	444.04	442.48	442.28	442.26	443.70	444.24	443.59	444.80
21.....	443.98	444.50	444.63	445.83	445.69	442.49	442.56	442.31	443.57	444.04	443.49	444.48
22.....	444.28	444.34	444.08	446.10	446.12	442.32	442.67	442.48	443.23	443.48	443.40	444.08
23.....	443.74	444.00	444.04	448.30	445.32	442.62	442.98	442.42	443.16	443.41	443.33	443.76
24.....	443.74	444.13	443.86	447.12	444.55	442.58	442.60	442.44	443.81	444.41	443.36	443.50
25.....	443.71	444.12	443.68	445.80	444.24	442.47	442.41	442.46	444.48	445.32	443.52	443.48
26.....	443.48	444.06	443.62	445.36	444.18	442.44	442.25	442.28	444.74	445.37	443.54	443.28
27.....	443.51	444.12	443.42	445.62	443.84	442.49	442.29	442.43	444.10	444.78	443.35	443.20
28.....	443.74	444.03	443.64	445.88	443.45	442.42	442.34	442.49	443.64	444.19	443.26	443.14
29.....	443.55	443.90	445.52	445.50	443.42	442.34	442.16	442.36	443.30	443.96	443.05	443.09
30.....	443.56	......	445.56	445.12	444.56	442.30	442.22	442.29	443.36	443.65	443.09	143.29
31.....	443.42	......	445.60	......	444.57	......	442.44	442.66	......	443.56	......	144.17

a Gage out of order.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of West Canada Creek above Morgan Dam at Trenton Falls, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	753.86	752.51	751.76	754.56	753.91	752.96	751.16	751.21	751.31	753.06	753.01	750.96
2.....	753.56	752.51	751.66	754.41	754.11	752.61	751.16	751.21	751.36	754.01	753.61	751.31
3.....	753.31	752.46	751.66	754.21	753.46	752.36	751.11	751.51	751.91	753.41	753.51	755.81
4.....	753.26	752.46	751.56	753.81	753.01	752.26	751.11	751.66	752.51	752.96	753.21	755.31
5.....	753.16	752.36	751.56	753.51	753.01	752.16	751.11	751.36	752.31	752.96	753.06	753.11
6.....	753.16	752.51	751.56	754.51	752.96	751.96	751.11	751.31	752.26	752.86	752.81	753.21
7.....	753.46	752.46	751.56	755.91	752.86	751.86	751.06	751.31	751.86	752.71	753.06	753.96
8.....	753.46	752.46	751.56	756.36	752.86	751.71	750.96	751.31	751.86	752.51	756.86	753.31
9.....	753.31	752.46	751.61	755.66	752.86	751.56	751.06	751.26	751.86	752.31	755.51	752.76
10.....	753.01	752.41	751.46	754.91	752.51	751.56	751.06	751.36	751.71	752.11	757.71	752.16
11.....	753.06	752.36	751.46	754.36	752.26	751.46	751.11	751.36	751.71	752.01	753.56	752.06
12.....	752.76	751.76	751.46	753.91	752.36	751.46	751.16	751.66	752.01	752.21	752.81	752.01
13.....	752.96	751.76	751.46	754.01	752.46	751.46	751.16	751.66	751.66	752.96	752.26	751.51
14.....	752.96	751.76	751.56	754.46	752.71	751.46	751.61	751.56	751.61	753.06	752.96	751.56
15.....	753.06	751.76	751.56	755.66	752.56	751.36	752.06	751.56	751.01	752.96	753.31	751.56
16.....	752.96	751.76	753.76	756.96	752.51	751.36	751.66	751.21	754.01	752.66	753.16	751.56
17.....	752.86	751.76	754.41	757.26	753.11	751.36	751.56	751.31	753.16	752.56	752.76	751.51
18.....	752.76	751.76	754.46	756.36	753.81	751.36	751.41	751.06	752.51	752.56	752.31	751.56
19.....	752.86	751.56	753.96	756.41	753.61	751.26	751.46	751.56	753.06	753.21	752.11	752.41
20.....	753.21	751.56	753.81	755.66	753.01	751.26	751.46	751.56	753.31	753.91	751.91	753.06
21.....	753.26	753.31	753.46	754.91	754.66	751.26	751.21	751.51	753.11	753.66	751.81	753.06
22.....	753.06	752.26	753.16	755.21	755.31	751.26	751.56	751.56	752.66	753.16	751.66	752.76
23.....	753.46	751.46	753.06	757.66	754.16	751.26	751.56	751.61	752.61	752.56	751.66	752.31
24.....	753.06	751.66	752.96	755.91	753.41	751.36	751.51	751.56	753.06	753.51	751.66	751.91
25.....	752.96	751.91	752.86	755.06	752.91	751.36	751.51	751.31	753.46	755.21	751.36	751.86
26.....	753.21	751.66	752.56	754.96	752.61	751.36	751.51	751.31	753.96	755.21	751.16	751.56
27.....	752.76	751.66	752.26	755.76	752.41	751.36	751.51	751.61	753.66	754.66	751.06	751.56
28.....	752.76	751.56	752.16	755.56	752.01	751.31	750.86	751.31	753.11	753.81	751.06	751.56
29.....	752.66	751.76	752.36	754.51	751.91	751.26	751.31	751.41	752.91	753.46	751.01	751.56
30.....	752.66	......	753.71	754.16	753.81	751.16	751.21	751.36	752.86	753.26	751.51	751.61
31.....	*a*	......	754.36	......	753.36	......	751.21	751.16	......	753.11	......	752.21

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of West Canada Creek above Power Co.'s Dam at Trenton Falls, N. Y.

DAY.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	1,019.86	1,017.65	1,018.06	1,019.52	1,019.27	1,018.77	1,009.27	1,012.19	1,009.48	1,019.60	1,019.60	1,019.27
2	1,019.56	1,017.23	1,018.48	1,019.56	1,019.52	1,018.52	1,014.81	1,015.15	1,015.65	1,020.31	1,020.15	1,019.36
3	1,019.52	1,017.81	1,019.31	1,019.44	1,018.86	1,018.31	1,017.23	1,016.40	1,019.36	1,019.94	1,020.06	1,022.10
4	1,019.36	1,019.27	1,017.23	1,019.02	1,018.73	1,018.19	1,018.44	1,019.56	1,019.65	1,019.73	1,019.73	1,021.23
5	1,019.31	1,016.77	1,016.65	1,018.86	1,019.48	1,017.98	1,013.44	1,015.94	1,019.31	1,019.73	1,019.65	1,020.52
6	1,018.98	1,017.98	1,014.73	1,019.73	1,019.06	1,017.90	1,016.19	1,011.52	1,019.40	1,019.73	1,019.52	1,020.86
7	1,019.48	1,016.48	1,014.44	1,021.15	1,019.15	1,017.73	1,016.69	1,010.10	1,019.48	1,019.52	1,019.81	1,020.73
8	1,018.98	1,017.65	1,016.02	1,021.69	1,019.23	1,017.77	1,011.65	1,009.27	1,019.48	1,019.36	1,023.27	1,020.40
9	1,018.90	1,017.02	1,014.94	1,020.69	1,018.98	1,017.81	1,011.36	1,009.23	1,013.48	1,019.27	1,021.98	1,019.69
10	1,018.69	1,017.48	1,019.36	1,019.98	1,018.60	1,017.48	1,012.40	1,012.52	1,011.94	1,019.27	1,021.98	1,019.73
11	1,018.81	1,019.65	1,016.94	1,019.44	1,018.40	1,017.48	1,010.94	1,015.31	1,011.48	1,019.27	1,020.31	1,019.73
12	1,017.69	1,017.23	1,013.81	1,019.06	1,018.44	1,017.23	1,015.40	1,016.81	1,016.56	1,020.36	1,020.02	1,019.40
13	1,018.40	1,017.19	1,012.94	1,019.02	1,018.40	1,016.81	1,012.10	1,014.73	1,013.06	1,019.90	1,019.81	1,019.19
14	1,019.94	1,016.52	1,015.40	1,019.90	1,018.52	1,016.56	1,015.48	1,012.69	1,012.27	1,019.77	1,020.10	1,019.40
15	1,018.65	1,013.31	1,016.27	1,020.48	1,018.40	1,017.02	1,019.19	1,013.77	1,009.60	1,019.56	1,020.27	1,019.56
16	1,018.40	1,017.98	1,018.90	1,022.23	1,018.31	1,019.36	1,015.60	1,014.02	1,020.52	1,019.44	1,020.23	1,019.36
17	1,018.48	1,016.56	1,019.48	1,022.90	1,019.06	1,018.81	1,009.02	1,014.31	1,019.94	1,019.36	1,020.02	1,019.31
18	1,017.98	1,019.06	1,019.23	1,021.81	1,019.52	1,018.02	1,010.40	1,011.44	1,019.52	1,019.23	1,019.69	1,019.27
19	1,019.27	1,017.15	1,019.10	1,021.90	1,019.27	1,015.10	1,011.06	1,011.90	1,019.98	1,019.65	1,019.60	1,019.27
20	1,019.65	1,017.94	1,019.02	1,020.90	1,018.69	1,014.65	1,013.40	1,012.73	1,019.94	1,020 40	1,019.52	1,020.19
21	1,020.27	1,018.48	1,018.73	1,020.19	1,020.19	1,013.19	1,016.65	1,013.06	1,019.81	1,020.15	1,019.52	1,020.27
22	1,019.81	1,018.56	1,018.56	1,020.65	1,020.65	1,018.48	1,019.19	1,013.77	1,019.73	1,019.65	1,019.52	1,019.90
23	1,018.90	1,018.02	1,018.56	1,023.40	1,019.56	1,019.52	1,019.10	1,012.10	1,019.40	1,019.56	1,019.48	1,019.69
24	1,019.02	1,018.77	1,018.56	1,021.31	1,019.10	1,015.40	1,014.94	1,014.19	1,019.81	1,020.06	1,019.56	1,019.48
25	1,018.77	1,019.77	1,019.02	1,020.06	1,018.81	1,013.81	1,011.48	1,014.98	1,020.02	1,021.19	1,019.48	1,019.56
26	1,018.94	1,018.73	1,017.81	1,019.69	1,018.69	1,013.77	1,012.06	1,012.44	1,020.60	1,021.23	1,020.36	1,019.15
27	1,018.86	1,018.69	1,017.86	1,020.69	1,018.23	1,013.90	1,012.15	1,013.52	1,020.06	1,020.56	1,019.27	1,019.19
28	1,019.56	1,018.81	1,017.86	1,020.98	1,017.90	1,011.69	1,005.23	1,011.23	1,019.73	1,020.27	1,019.27	1,019.23
29	1,017.94	1,017.98	1,018.23	1,019.98	1,017.90	1,009.02	1,012.65	1,011.19	1,019.65	1,019.98	1,019.15	1,019.23
30	1,017.73	....	1,019.19	1,019.40	1,019.44	1,015.10	1,013.52	1,007.15	1,019.56	1,019.86	1,019.15	1,019.36
31	1,017.60	....	1,019.52	....	1,018.94	....	1,010.98	1,011.15	....	1,019.69	....	1,019.73

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River at Genesee Street Bridge, Utica, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	396.59	395.84	396.84	404.69	399.14	399.34	397.24	395.04	395.14	395.54	395.69	396.29
2.....	396.54	395.84	396.74	404.94	398.94	398.84	396.74	395.04	395.14	395.39	395.64	396.29
3.....	396.39	395.74	396.74	405.19	398.72	399.24	396.34	395.34	395.14	395.29	395.54	396.89
4.....	396.34	395.64	396.74	405.34	398.64	399.44	395.84	395.24	395.14	395.24	395.54	396.99
5.....	396.34	395.64	396.74	405.24	398.59	399.44	395.49	395.24	395.14	395.24	395.49	397.04
6.....	396.24	395.64	396.84	404.84	398.64	399.34	395.44	395.14	395.49	395.24	395.44	397.09
7.....	396.19	395.64	396.94	404.69	398.84	399.34	395.34	395.14	395.59	395.14	395.44	397.14
8.....	396.14	395.54	397.04	404.89	398.84	399.34	395.34	395.14	395.29	395.14	395.84	397.14
9.....	396.14	395.54	397.14	405.19	398.84	398.99	395.34	395.04	395.14	395.14	396.19	397.19
10.....	396.04	395.54	397.14	405.19	398.74	398.59	395.24	395.09	395.14	395.34	396.24	397.39
11.....	396.04	395.54	397.24	404.89	398.69	398.54	395.24	395.14	395.14	395.69	396.24	397.44
12.....	395.99	395.54	397.39	402.69	398.64	398.54	395.14	395.24	395.24	396.04	396.24	397.54
13.....	395.94	395.54	397.49	400.99	398.64	398.44	395.14	395.24	395.24	395.94	396.14	397.59
14.....	395.89	395.54	397.59	399.24	398.59	398.44	395.20	395.24	395.24	395.69	396.24	397.64
15.....	395.84	395.59	397.94	399.04	398.54	398.34	395.29	395.24	395.24	395.49	396.24	397.74
16.....	395.84	395.64	398.19	398.94	398.44	398.34	395.24	395.24	395.34	395.34	396.34	397.64
17.....	395.84	395.74	398.39	398.94	398.54	398.34	395.24	395.24	395.64	395.34	396.34	397.64
18.....	395.74	395.74	398.44	398.94	398.69	398.34	395.14	395.24	395.64	395.24	396.34	397.74
19.....	396.09	395.74	398.44	399.04	398.69	398.24	395.14	395.24	395.94	395.24	396.34	397.84
20.....	396.14	395.99	398.49	398.99	398.64	398.24	395.14	395.14	396.14	395.24	396.24	397.94
21.....	396.14	396.14	398.79	398.94	398.99	398.14	395.14	395.14	395.99	395.14	396.14	398.14
22.....	396.14	396.44	398.99	398.99	399.69	398.14	395.14	395.14	395.54	395.14	396.14	398.24
23.....	396.29	396.79	399.29	399.19	400.09	398.14	395.14	395.14	395.34	395.14	396.04	398.24
24.....	396.14	396.94	399.49	399.44	399.69	398.09	395.14	395.14	395.94	395.99	395.94	398.14
25.....	396.14	396.99	399.89	399.34	399.24	397.99	395.14	395 14	396.69	396.54	396.14	398.19
26.....	396.04	397.14	400.29	399.29	398.89	397.89	395.04	395.14	397.04	396.44	396.79	398.24
27.....	396.04	397.44	400.49	399.19	398.49	397.84	395.04	395.14	396.89	396.24	397.14	398.29
28.....	395.94	397.39	400.74	399.09	398.44	397.74	395.04	395.14	396.29	396.14	396.99	398.49
29.....	395.94	397.04	401.64	398.99	398.44	397.69	395.04	395.14	395.84	396.09	396.79	398.69
30.....	395.94	......	403.49	399.04	399.24	397.59	395.04	395.14	395.54	395.99	396.59	398.99
31.....	395.89	......	404.29	......	399.54	......	395.04	395.14	......	395.79	......	399.24

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Nine-Mile Creek near Stittville, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	484.37	484.82	484.92	486.92	485.07	484.07	483.82	483.82	483.92	484.07	483.97	484.02
2.....	484.42	484.82	484.92	486.47	485.02	483.97	483.82	483.92	483.97	484.17	484.02	484.07
3.....	484.27	484.82	484.92	486.42	484.92	484.07	483.82	484.07	484.02	485.02	484.02	485.07
4.....	484.22	484.82	484.92	485.57	484.87	484.17	483.82	484.02	484.12	485.17	484.02	485.07
5.....	484.22	484.92	484.92	485.97	484.87	484.27	483.72	483.92	484.12	485.22	484.02	484.87
6.....	484.22	484.92	484.92	487.65	485.07	484.02	483.72	483.82	484.12	484.30	484.02	484.32
7.....	484.22	484.92	484.92	487.87	485.12	484.07	483.82	483.87	484.17	484.27	484.02	484.32
8.....	484.22	484.92	484.92	486.47	484.27	484.07	483.82	483.92	484.12	484.37	483.97	484.27
9.....	484.22	484.92	484.92	486.37	484.27	484.02	483.82	483.92	484.12	484.97	484.02	484.87
10.....	484.22	484.92	484.92	485.57	484.22	484.02	483.82	483.92	484.22	485.17	484.02	484.32
11.....	484.22	484.92	484.97	485.77	484.12	484.02	483.82	483.92	484.12	484.97	484.07	484.32
12.....	484.22	484.92	485.02	486.12	484.17	484.02	483.82	483.92	484.27	484.92	484.17	484.22
13.....	484.22	484.92	485.02	486.22	484.52	483.97	483.82	483.92	484.27	484.92	484.22	484.12
14.....	484.12	484.92	485.12	485.37	484.97	483.92	483.82	483.92	484.22	484.42	486.17	484.12
15.....	484.12	484.92	485.12	485.37	485.07	483.97	483.82	484.02	484.17	484.27	485.07	484.12
16.....	484.12	484.92	485.22	485.47	485.12	484.12	483.82	484.07	484.17	484.02	484.92	484.07
17.....	484.12	484.92	485.22	486.02	485.17	484.17	483.82	484.07	484.22	483.97	484.12	484.02
18.....	484.97	484.92	485.32	485.87	485.07	484.12	483.82	484.12	484.12	483.92	483.97	484.07
19.....	485.22	*a*	485.32	486.02	485.07	484.07	483.82	484.02	484.17	485.17	484.02	484.02
20.....	484.22	*a*	485.37	485.37	485.62	484.07	483.82	484.02	484.27	485.02	484.07	484.02
21.....	484.12	*a*	485.42	485.07	485.62	483.97	483.82	484.02	484.27	484.17	484.07	484.02
22.....	484.92	*a*	485.42	485.02	485.07	483.92	483.92	484.07	484.37	484.07	484.07	484.02
23.....	484.92	*a*	485.42	484.97	484.97	483.92	483.97	484.12	484.32	484.12	484.17	484.02
24.....	484.92	*a*	485.47	485.12	484.27	483.92	483.97	484.12	485.42	486.02	484.22	484.02
25.....	484.92	485.12	485.47	485.07	484.17	483.92	483.92	484.12	485.22	485.17	484.27	484.02
26.....	484.92	485.92	485.52	484.92	484.02	483.82	483.82	484.07	485.02	484.67	484.22	484.07
27.....	484.92	484.97	485.92	484.82	484.02	483.82	483.82	484.12	484.97	484.47	484.07	484.07
28.....	484.92	484.92	486.02	484.97	484.17	483.82	483.82	484.17	484.37	484.27	484.02	484.12
29.....	484.82	484.92	487.67	485.07	484.57	483.82	483.82	484.27	485.12	484.12	484.02	484.12
30.....	484.82	......	487.47	485.07	484.97	483.82	483.82	484.32	485.17	484.12	484.02	484.22
31.....	484.82	......	487.37	......	484.62	......	483.82	484.32	......	484.02	......	485.27

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River below State Dam at Rome, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	428.96	429.26	429.16	429.16	429.96	429.46	427.86	427.66	427.76	427.66	427.66	428.06
2.....	428.96	429.26	429.16	429.16	430.46	429.46	427.86	427.66	427.76	427.66	427.66	428.26
3.....	428.86	429.26	429.16	429.46	430.26	429.46	427.86	427.66	427.76	427.66	427.66	428.26
4.....	428.66	429.06	429.16	429.46	429.86	429.56	427.86	427.96	427.76	427.66	427.66	428.06
5.....	428.66	429.06	429.16	429.56	429.66	429.46	427.86	427.96	427.76	427.66	427.66	428.96
6.....	428.66	429.06	429.06	430.06	429.46	429.56	427.86	427.86	427.76	427.66	427.66	428.96
7.....	428.66	429.06	429.06	429.96	428.36	429.56	427.86	427.86	427.76	427.66	427.66	428.86
8.....	428.66	429.06	429.26	429.96	428.46	429.56	427.86	427.76	427.66	427.66	427.66	428.76
9.....	428.66	429.06	429.26	430.16	428.46	429.16	427.86	427.76	427.66	427.66	427.66	428.76
10.....	428.56	429.06	429.16	430.16	428.46	429.36	427.86	427.76	427.66	427.66	427.66	428.66
11.....	428.56	428.96	429.26	430.26	428.06	429.46	427.86	427.86	427.66	427.66	427.66	428.66
12.....	428.56	428.96	429.26	431.26	428.26	429.46	427.86	427.76	427.66	427.66	427.66	428.46
13.....	428.56	428.96	429.26	430.26	428.26	429.46	427.86	427.76	427.66	427.66	427.66	428.26
14.....	428.46	428.96	429.26	430.06	428.46	429.46	427.86	427.76	427.66	427.66	427.66	428.96
15.....	428.46	428.96	429.26	430.06	428.46	429.46	427.86	427.76	427.66	427.66	427.66	428.96
16.....	428.46	428.96	429.26	430.16	428.26	429.46	427.86	427.76	427.66	427.66	427.66	428.96
17.....	428.46	428.96	429.26	429.96	428.76	429.56	427.86	427.76	427.66	427.66	427.66	428.96
18.....	428.46	428.86	429.46	430.16	429.06	429.56	427.86	427.76	427.66	427.66	427.66	428.96
19.....	428.56	429.06	429.56	430.26	429.06	428.96	427.86	427.76	427.66	427.66	427.66	428.96
20.....	428.56	429.06	429.46	430.26	429.06	427.86	427.86	427.76	427.66	427.66	427.66	428.96
21.....	428.86	429.06	429.46	430.26	429.46	427.86	427.86	427.76	427.66	427.66	428.06	428.86
22.....	429.26	429.06	429.46	430.46	429.46	427.86	427.86	427.76	427.66	427.66	427.66	428.86
23.....	429.26	429.06	429.46	430.46	429.26	427.86	427.86	427.76	427.66	427.66	427.66	428.86
24.....	429.26	429.06	429.46	430.46	428.71	427.86	427.86	427.76	427.66	428.06	427.66	428.86
25.....	429.26	429.26	429.46	430.26	428.41	427.86	427.86	427.76	427.66	427.66	427.66	428.66
26.....	429.26	429.26	429.26	430.26	428.46	427.86	427.86	427.76	428.26	427.66	427.66	428.46
27.....	429.16	429.26	429.26	430.46	428.46	427.86	427.86	427.76	427.86	427.66	427.66	428.26
28.....	429.26	429.26	429.26	430.26	428.46	428.26	427.86	427.76	427.86	427.66	427.66	427.96
29.....	429.26	429.16	429.46	430.06	428.46	428.26	427.86	427.76	427.66	427.66	427.66	427.96
30.....	429.26	......	429.26	429.96	428.46	428.06	427.66	427.76	427.66	427.66	427.66	427.96
31.....	429.26	......	429.16	......	428.46	......	427.66	427.76	......	427.66	......	428.96

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River above Dam at Rome, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	431.83	431.73	431.43	432.03	432.53	432.43	430.73	430.23	430.23	430.53	430.33	430.63
2.....	431.83	431.73	431.43	432.13	432.93	432.43	430.73	430.13	430.23	430.53	430.33	430.73
3.....	431.83	431.73	431.43	432.33	432.93	432.43	430.73	430.13	430.23	430.53	430.23	431.53
4.....	431.73	431.73	431.43	432.33	432.23	432.53	429.93	430.53	430.23	430.33	430.23	430.53
5.....	431.73	431.73	431.43	432.33	432.13	432.33	430.23	430.33	430.23	430.33	430.43	431.73
6.....	431.73	431.53	431.43	432.93	431.93	432.43	430.23	430.23	430.23	430.23	430.43	431.73
7.....	431.73	431.53	431.43	432.53	431.53	432.43	430.13	430.23	430.23	430.23	430.43	431.73
8.....	431.73	431.53	431.53	432.53	431.53	432.43	430.13	430.23	430.23	430.23	430.43	431.73
9.....	431.73	431.53	431.53	432.83	431.53	432.13	430.13	430.23	430.23	430.23	430.43	431.73
10.....	431.73	431.53	431.53	432.83	431.53	432.33	430.13	430.23	430.13	430.23	430.43	431.73
11.....	431.73	431.53	431.73	432.73	431.13	432.33	430.13	430.23	430.13	430.23	430.43	431.73
12.....	431.73	431.53	431.73	432.73	431.33	432.33	430.23	430.23	430.13	430.23	430.43	431.53
13.....	431.73	431.53	431.73	432.73	431.33	432.33	430.23	430.23	430.23	430.23	430.43	431.53
14.....	431.53	431.53	431.73	432.53	431.53	432.33	430.23	430.23	430.23	430.23	430.33	432.33
15.....	431.53	431.53	431.73	432.73	431.53	432.33	430.13	430.23	430.23	430.23	430.53	432.13
16.....	431.53	431.53	431.73	432.73	431.33	432.33	430.23	430.23	430.23	430.23	430.73	432.13
17.....	431.53	431.53	431.73	432.53	431.73	432.43	430.23	430.23	430.23	430.23	430.73	432.23
18.....	431.53	431.33	431.93	432.73	431.93	432.43	430.23	430.23	430.23	430.13	430.73	432.23
19.....	431.53	431.33	432.13	432.73	432.13	431.93	430.13	430.23	430.23	430.13	430.73	432.33
20.....	431.53	431.33	431.93	432.73	432.13	429.73	430.13	430.23	430.23	430.23	430.73	432.33
21.....	431.63	431.33	431.93	432.73	432.33	429.73	430.13	430.23	430.23	430.23	431.53	432.23
22.....	431.73	431.33	431.93	432.93	432.33	429.73	430.13	430.13	430.23	430.23	430.73	432.23
23.....	431.73	431.33	431.93	432.93	432.13	429.73	430.13	430.13	430.23	430.23	430.73	432.23
24.....	431.73	431.33	431.93	432.93	431.33	429.73	430.13	430.13	430.33	431.53	430.73	432.23
25.....	431.73	431.53	431.93	432.73	431.01	429.73	430.13	430.23	430.33	430.53	430.73	432.23
26.....	431.73	431.53	431.93	432.73	431.08	429.73	430.13	430.23	431.43	430.53	430.73	432.13
27.....	431.73	431.53	431.93	432.93	431.08	429.73	430.13	430.23	431.23	430.53	430.53	432.13
28.....	431.73	431.53	431.73	432.73	431.08	431.23	430.23	430.23	431.23	430.53	430.53	432.13
29.....	431.73	431.43	431.93	432.53	431.08	431.23	430.33	430.23	430.73	430.33	430.73	431.93
30.....	431.73	......	431.93	432.53	431.08	431.13	430.23	430.23	430.50	430.33	430.73	431.93
31.....	431.73	......	431.93	......	431.13	......	430.23	430.23	......	430.43	......	432.73

***Mean** Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River at Floyd Ave. Bridge, Rome, N. Y.*

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	447.06	446.76	447.16	447.41	448.71	446.53	446.51	446.56	446.51	446.61	446.49	446.51
2.....	446.91	446.71	447.09	447.53	448.91	448.11	446.51	446.56	446.53	446.53	446.51	446.51
3.....	446.83	446.71	447.01	448.46	448.71	448.11	446.51	446.53	446.51	446.51	446.51	446.51
4.....	446.73	446.71	447.01	448.43	448.11	447.81	446.51	446.76	446.51	446.51	446.49	446.51
5.....	446.71	446.81	447.06	448.33	448.11	447.19	446.51	446.53	446.53	446.51	446.51	446.61
6.....	446.71	446.76	447.01	448.56	447.93	448.06	446.51	446.53	446.53	446.41	446.46	447.49
7.....	446.71	446.76	446.99	448.43	446.51	448.11	446.56	446.56	446.53	446.46	446.61	447.41
8.....	446.71	446.73	446.99	448.51	446.51	448.03	446.56	446.59	446.53	446.49	446.49	447.31
9.....	446.89	446.71	447.01	448.43	446.51	448.09	446.51	446.59	446.53	446.43	446.46	447.41
10.....	446.91	446.71	447.01	448.41	446.59	448.03	446.56	446.63	446.56	446.49	446.46	447.41
11.....	447.01	446.76	447.01	448.41	446.83	448.01	446.53	446.51	446.53	446.51	446.46	447.41
12.....	446.91	446.73	447.01	448.31	446.91	447.91	446.56	446.51	446.51	446.51	446.51	447.46
13.....	446.81	446.71	446.96	448.33	446.91	448.13	446.56	446.51	446.51	446.51	446.46	447.41
14.....	446.76	446.71	446.93	448.36	446.91	448.73	446.59	446.59	446.53	446.51	446.49	447.41
15.....	446.81	446.73	446.99	448.51	446.91	448.71	446.53	446.81	446.71	446.46	446.51	448.01
16.....	446.79	446.76	447.71	448.51	447.23	448.61	446.53	446.79	446.63	446.46	446.51	448.01
17.....	446.79	446.73	447.81	448.43	447.51	448.36	446.61	446.69	446.63	446.41	446.51	447.91
18.....	446.93	446.71	448.19	448.41	447.46	447.31	446.61	446.59	446.61	446.46	446.49	447.93
19.....	446.96	446.76	448.21	448.41	447.11	446.31	446.61	446.51	446.61	446.56	446.49	447.96
20.....	447.09	447.09	447.93	448.41	447.11	446.31	446.61	446.51	446.56	446.51	446.51	447.96
21.....	447.09	447.21	448.09	448.41	447.51	446.31	446.61	446.53	446.61	446.46	446.51	447.96
22.....	446.96	447.23	448.11	448.43	446.71	446.31	446.61	446.53	446.66	446.41	446.49	446.96
23.....	446.91	447.29	448.11	448.53	446.41	446.39	446.53	446.51	446.63	446.41	446.49	446.96
24.....	446.89	447.39	447.46	448.41	447.23	446.41	446.56	446.51	446.66	446.43	446.51	447.01
25.....	446.81	447.36	447.06	448.41	448.11	446.41	446.56	446.51	446.61	446.56	446.51	447.01
26.....	446.79	447.31	446.99	448.41	447.41	446.41	446.63	446.53	446.56	446.51	446.49	446.96
27.....	446.79	447.41	446.91	448.41	447.83	446.41	446.69	446.53	446.53	446.51	446.46	446.99
28.....	446.71	447.31	446.91	448.36	448.09	446.41	446.61	446.56	446.51	446.46	446.51	447.01
29.....	446.76	447.26	447.56	448.36	447.86	446.51	446.56	446.51	446.53	446.49	446.51	447.11
30.....	446.81	......	447.91	448.36	447.36	446.51	446.61	446.51	446.59	446.49	446.53	447.21
31.....	446.81	......	447.26	......	446.91	......	446.59	446.51	......	446.51	......	447.46

***Mean** Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River below Dam at Ridge Mills, N. Y.*

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	459.70	459.60	461.20	459.80	461.20	460.50	459.30	459.20	459.10	459.00	459.00	459.10
2.....	459.40	459.60	461.20	459.90	461.20	459.70	459.20	459.20	459.10	459.00	459.00	459.10
3.....	459.40	459.60	461.20	460.80	461.20	460.50	459.20	459.50	459.10	459.00	459.00	459.20
4.....	459.60	459.70	461.20	460.70	460.70	460.70	459.20	459.50	459.10	459.00	459.00	459.20
5.....	459.20	459.90	461.20	460.80	460.70	460.60	459.20	459.20	459.10	458.90	459.00	459.20
6.....	459.60	459.70	460.90	460.80	460.70	460.50	459.20	459.20	459.30	458.90	459.00	460.00
7.....	459.90	459.60	460.90	461.00	459.10	460.50	459.20	459.20	459.20	458.90	459.00	460.00
8.....	460.10	459.60	460.80	460.80	459.10	460.50	459.20	459.20	459.20	459.00	459.20	460.00
9.....	460.10	459.80	460.20	460.80	458.70	460.50	459.20	459.20	459.20	459.10	459.20	460.00
10.....	460.20	459.80	460.40	460.80	458.70	460.50	459.20	459.20	459.20	459.10	459.10	460.00
11.....	460.30	460.00	460.40	460.80	459.00	460.50	459.20	459.00	459.20	459.10	459.00	460.00
12.....	460.20	461.20	459.80	460.80	459.50	460.50	459.20	459.00	459.20	459.00	459.00	460.00
13.....	460.70	461.20	459.60	460.70	459.50	460.50	459.20	459.00	459.20	459.00	459.00	460.00
14.....	460.70	461.20	459.20	460.80	459.50	461.00	459.20	459.00	459.20	459.00	459.30	460.00
15.....	460.80	460.20	459.20	460.90	459.50	461.00	459.20	459.00	459.20	459.00	459.20	460.50
16.....	460.90	460.20	459.80	460.80	459.50	461.00	459.20	459.00	459.30	459.00	459.20	460.50
17.....	459.80	460.00	460.00	460.80	460.00	460.80	459.20	459.00	459.20	459.00	459.20	460.50
18.....	460.00	460.00	459.80	460.90	460.00	459.40	459.20	459.20	459.20	459.00	459.20	460.50
19.....	460.90	459.90	459.90	460.80	459.90	459.40	459.20	459.10	459.30	459.00	459.10	460.60
20.....	460.50	460.50	459.90	460.80	460.00	458.80	459.20	459.10	459.20	459.00	459.10	460.50
21.....	460.20	460.00	460.70	460.80	460.60	458.80	459.20	459.10	459.20	459.00	459.10	460.50
22.....	460.10	459.90	460.60	460.80	460.50	459.50	459.20	459.20	459.20	459.00	459.10	460.50
23.....	459.60	460.80	460.50	460.80	460.40	459.50	459.20	459.20	459.30	459.00	459.10	460.40
24.....	459.50	460.80	459.90	460.80	460.40	458.90	459.20	459.10	459.40	459.00	459.10	460.40
25.....	459.40	460.90	459.60	460.80	459.60	459.00	459.20	459.10	459.40	459.10	459.20	460.40
26.....	459.70	460.90	459.40	460.80	459.60	458.90	459.20	459.10	459.30	459.10	459.10	459.70
27.....	459.90	460.90	459.40	460.80	459.80	458.90	459.20	459.10	459.30	459.10	459.10	459.70
28.....	459.50	461.10	459.40	460.80	459.80	459.70	459.20	459.10	459.00	459.10	459.10	459.20
29.....	459.50	461.20	459.90	460.80	459.80	459.70	459.20	459.10	459.00	459.00	459.10	459.20
30.....	459.70	......	460.50	460.80	458.60	459.30	459.20	459.10	459.00	459.00	459.10	459.20
31.....	459.60	......	459.80	......	460.60	......	459.20	459.10	......	459.00	......	460.50

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River above Dam at Ridge Mills, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	466.52	466.22	466.32	466.72	467.72	467.22	466.12	466.02	465.92	465.82	465.92	465.92
2	466.32	466.22	466.22	466.82	467.72	466.52	466.02	466.02	465.92	465.82	465.92	465.92
3	466.32	466.22	466.22	467.42	467.72	467.12	466.02	466.22	465.92	465.82	465.92	466.02
4	466.72	466.22	466.32	467.32	467.22	467.32	466.02	466.22	465.92	465.82	465.92	465.92
5	466.12	466.22	466.32	467.42	467.22	467.22	466.02	466.02	465.92	465.82	465.92	465.92
6	466.02	466.32	466.22	467.22	467.22	467.22	466.02	466.02	466.17	465.82	465.92	466.72
7	466.12	466.32	466.22	467.52	466.02	467.22	466.02	466.02	465.92	465.92	465.92	466.72
8	466.22	466.22	466.32	467.42	466.02	467.22	466.02	466.02	465.92	465.92	466.02	466.72
9	466.22	466.22	466.32	467.42	466.02	467.22	466.02	466.02	465.92	465.92	466.02	466.72
10	466.22	466.22	466.12	467.42	466.02	467.22	466.02	466.02	465.92	465.92	465.92	466.72
11	466.32	466.22	466.12	467.42	466.22	467.12	466.02	465.92	465.92	465.92	465.92	466.72
12	466 22	466.22	466.12	467.32	466.32	467.12	466.02	465.92	465.92	465.92	465.92	466.72
13	466.22	466.22	466.02	467.32	466.32	467.12	466.02	465.92	465.92	465.92	465.92	466.72
14	466.22	466.42	466.02	467.42	466.32	467.62	466.02	465.92	465.92	465.92	466.12	466.72
15	466.62	466.42	466.02	467.42	466.32	467.62	466.02	465.92	465.92	465.92	466.12	467.12
16	466 62	466.42	466.42	467.42	466.32	467.42	466.02	465.92	466.02	465.92	466.12	467.12
17	466.62	466.42	466.62	467.42	466.72	467.42	466.02	465.92	465.92	465.92	466.02	467.12
18	466 42	466.42	466.62	467.42	466.82	466.22	466.02	466.02	465.92	465.92	466.02	467.12
19	466.42	466.42	466.62	467.42	466.72	466.22	466.02	465.92	466.02	465.92	465.92	467.22
20	467.12	466.52	466.72	467.42	466.72	465.82	466.02	465.92	465.92	465.82	465.92	467.12
21	466.52	466.52	467.22	467.42	467.22	465.72	466.02	465.92	465.92	465.82	465.92	467.12
22	466.42	466.62	467.12	467.42	467.02	466.32	466.02	465.92	465.92	465.82	465.92	467.12
23	466.42	466.42	467.02	467.42	467.02	466.22	466.02	465.92	466.02	465.82	465.92	467.12
24	466.32	466.42	466.52	467.42	467.02	465.82	466.02	465.92	466.12	465.82	465.92	467.12
25	466.32	466.42	466.42	467.42	466.72	465.72	466.02	465.92	466.12	465.92	466.02	467.12
26	466.22	466.42	466.42	467.42	466.72	465.82	466.02	465.92	466.02	466.02	466.02	466.62
27	466.32	466.42	466.32	467.42	466.72	465.82	466.02	465.92	466.02	465.92	465.92	466.62
28	466.32	466.42	466.32	467.42	466.72	466.52	466.02	465.92	465.92	465.92	465.92	466.22
29	466.32	466.32	466.72	467.42	466.72	466.52	466.02	465.92	465.82	465.92	465.92	466.22
30	466 42	......	467.12	467.42	465.62	466.22	466.02	465.92	465.82	465.92	465.92	466.22
31	466.32	......	466.62	......	467.22	......	466.02	465.92	......	465.92	......	467.12

MOHAWK RIVER AT TRIBES HILL, N. Y.

This gaging station, which is located at the suspension bridge over the Mohawk river between Fort Hunter and Tribes Hill, was established April 3, 1904, by E. A. Lamb of this Department in coöperation with the U. S. Weather Bureau. The gage was formerly a vertical board attached to the downstream end of the north abutment of the suspension bridge. A standard box-and-chain gage is now used.

The elevation of bench-mark, marked "U. S. Weather Bureau Tablet No. 13," set in second course of the northeast anchorage of this bridge, is 295.021. Observations of the stage of the stream were taken twice each day during 1912.

Current-meter measurements are taken from the downstream side of the suspension bridge, which is 535.6 feet long between abutments. The channel of the river is straight for some distance each way from the bridge, and the cross-section directly under the bridge and below the bridge is quite uniform. About 300 feet above the bridge rapids are formed during low water, the river being shallow and having a rough and stony bed.

This gaging station is located about 1,000 feet below the junction of the Mohawk river and Schoharie creek, and the record here will show the combined discharge of these streams.

Beginning in 1907 the conditions at this station have been modified by construction work for the Barge canal, in progress near by. The calculated discharge for these years is approximate only.

Mean Daily Discharge, Second-feet, of Mohawk River at Tribes Hill, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	7,000	550	1,520	36,800	14,100	6,825	1,775	1,120	*1,520	4,000	3,850	*3,420
2	7,800	550	1,120	*a*	13,800	*7,000	1,775	1,120	1,520	4,000	3,700	5,100
3	7,000	525	*1,120	33,600	11,850	7,000	1,775	1,300	1,520	4,300	*4,000	26,950
4	6,275	*525	1,120	26,950	9,600	7,000	1,775	*1,300	1,775	4,000	4,300	16,800
5	5,250	525	1,520	26,950	*8,875	5,925	1,775	1,300	2,162	3,700	4,300	14,100
6	4,600	520	1,520	36,800	9,600	5,250	1,648	1,300	2,575	*3,420	3,850	14,700
7	*4,300	520	2,025	**a*	9,100	4,950	*1,410	1,300	2,850	3,125	3,700	16,800
8	4,000	520	2,025	*a*	8,250	4,600	1,300	1,300	*2,988	2,438	20,100	*14,100
9	3,700	515	2,025	41,250	6,825	*4,300	1,300	1,648	2,988	2,300	24,900	7,600
10	3,420	515	*2,025	30,100	6,100	3,700	1,300	1,520	2,575	2,162	*11,100	6,100
11	3,125	*515	2,025	27,800	5,925	3,700	1,300	*1,520	2,575	2,025	9,350	7,600
12	2,575	515	2,575	25,300	*5,600	3,850	1,300	1,648	2,300	2,300	7,600	7,600
13	2,300	515	5,600	22,300	5,250	3,700	1,300	2,162	2,025	*2,162	6,650	4,950
14	*2,300	510	10,600	*24,125	4,600	3,560	*1,300	2,575	2,025	2,300	7,800	4,450
15	2,025	510	17,500	28,700	4,600	3,700	1,520	2,438	*2,575	2,162	9,350	*4,775
16	2,025	510	46,000	39,300	4,950	*3,420	1,520	2,025	3,125	2,300	7,000	4,950
17	1,775	510	*25,700	43,700	8,250	3,420	1,520	1,775	5,925	2,300	*6,650	5,425
18	1,775	*510	26,100	38,650	12,650	3,420	1,520	*1,775	5,600	2,300	5,762	5,250
19	1,520	510	29,150	31,600	*11,100	3,420	1,529	1,775	3,700	2,575	5,250	6,100
20	1,520	510	36,800	30,600	9,100	3,125	1,520	2,025	4,600	*4,775	5,600	8,250
21	*1,300	525	30,600	*23,750	9,600	2,712	*1,520	2,162	5,600	5,925	5,425	8,875
22	1,120	630	14,700	24,500	11,600	2,438	1,520	2,162	*5,250	4,775	5,425	*8,650
23	1,120	630	16,200	27,375	10,850	*2,300	1,410	1,648	4,600	5,250	5,600	7,800
24	960	630	*14,400	29,600	10,050	2,300	1,410	1,300	4,600	10,325	*5,762	7,200
25	710	*630	11,100	24,500	8,875	2,162	1,520	*1,648	8,875	18,425	7,400	6,462
26	710	630	9,100	20,800	*7,400	2,025	1,520	1,775	11,850	17,500	7,000	5,425
27	630	1,520	7,200	16,800	7,200	1,900	1,520	1,775	9,600	*15,300	5,925	5,425
28	*630	1,520	13,250	*13,800	7,600	1,775	*1,520	1,775	6,650	10,325	5,250	5,600
29	630	1,520	26,100	15,300	7,400	1,775	1,410	1,520	*4,950	7,600	4,775	*6,462
30	575	....	*a*	16,800	7,000	*1,775	1,300	1,520	4,300	5,762	4,600	8,250
31	550	....	**a*	....	8,025	....	1,120	1,520	....	4,000	....	10,850
Mean.	2,685	642	12,439	28,065	8,572	3,768	1,481	1,669	4,107	5,285	7,066	8,581

a Beyond limits of rating curve. * Sunday.

Monthly Discharge of Mohawk River at Tribes Hill, N. Y.
[Drainage area, 3,113 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1912.					
January	7,800	550	2,685	0.863	0.995
February	1,520	510	642	0.206	0.222
March	*a*46,000	1,120	12,439	4.00	4.61
April	*a*43,700	13,800	28,065	9.02	10.06
May	14,100	4,600	8,572	2.75	3.17
June	7,000	1,775	3,768	1.21	1.35
July	1,775	1,120	1,481	0.476	0.549
August	2,575	1,120	1,669	0.536	0.618
September	11,850	1,520	4,107	1.32	1.47
October	18,425	2,025	5,285	1.70	1.96
November	24,900	3,700	7,066	2.27	2.53
December	26,950	3,420	8,581	2.76	3.18

a Actual maximum beyond limits of rating curve.

Water-surface Elevation Gages Maintained on Mohawk River and Tributaries During the Year 1912.

LOCATION.	Date established.	Observer.	Elevation of zero mark (B. C. datum).	Type of gage.	Subdivision of gage.	Readings taken to
Mohawk river:						
Waterford	Jan. 15, 1907	Barge canal employee	0.00	Staff	$\frac{1}{10}$ foot	$\frac{1}{10}$ foot
Cohoes	Dec. —, 1903	James Murphy	153.47[a]	"	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Dunsbach Ferry, Emerick	Mar. 12, 1898	Robt. Wilson		"	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Rexford, above dam	Dec. 8, 1898	J. Reepmeyer, Jr.	208.16	Chain	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Schenectady	April 3, 1904	W. C. Vrooman	208.66	Staff	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Tribes Hill	Jan. 7, 1904	Clarence Hansen	263.71	Chain	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Fultonville	April 29, 1906	Ed. P. Ryan	268.69	"	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Canajoharie	Sept. 16, 1908	John J. Lyons	280.45	"	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Fort Plain	Dec. 30, 1905	Frank Fayant, Jr.	288.66	"	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Indian Castle, above Rocky Rift dam	Jan. 21, 1913	Chas. W. Slingerland	318.00	Staff	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Little Falls Paper Co.'s tail-race	1898	C. V. Barrett	320.72	"	Inch	Inch
Little Falls Paper Co.'s head-race	1898	C. V. Barrett	330.92	"	$\frac{1}{10}$ foot	$\frac{1}{10}$ foot
Little Falls, Astoronga tail-race	1908	Edw. Haggarty	317.70	"	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Little Falls, Astoronga head-race	1908	John M. Burns	332.17	"	Inch	Inch
Little Falls, above State dam	1898	John Stark	360.31	"	$\frac{1}{10}$ foot	$\frac{1}{10}$ foot
St. Johnsville, at bridge	Jan. 28, 1913	Barge canal employee	393.00	Chain	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Herkimer, Mohawk avenue bridge		Edward P. Walthart	380.00	Staff	$\frac{1}{10}$ "	$\frac{1}{100}$ "
Herkimer, Washington street bridge	Feb. 4, 1913	Edward P. Walthart	371.50	Chain	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Ilion, at bridge	Jan. 24, 1913	Paul C. Earl	379.00	"	$\frac{1}{10}$ "	$\frac{1}{100}$ "
Frankfort, at bridge	Jan. 25, 1913	Clayton G. Morse	378.00	"	$\frac{1}{10}$ "	$\frac{1}{100}$ "
Utica	Mar. 15, 1905	W. E. Young	393.14	Staff	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Rome, below dam	May 3, 1904	John Phillips	426.46	"	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Rome, above dam	"	John Phillips	429.73	"	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Rome, Floyd avenue	July 9, 1907	G. G. Williams	445.01	Chain	$\frac{1}{10}$ "	$\frac{1}{100}$ "
Ridge Mills, below dam	May 3, 1904	Daniel Brown	456.20	Staff	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Ridge Mills, above dam	"	Daniel Brown	465.22	"	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Stony creek — Crescent	April 13, 1912	Wm. Jones	*	"	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Schoharie creek:						
Fort Hunter	Sept. 24, 1898	H. A. Hockel	277.50	Chain	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Central Bridge	April 3, 1904	A. M. Spencer	565.96[b]	"	$\frac{1}{10}$ "	$\frac{1}{100}$ "
Middleburg	Aug. 24, 1906	Minnie E. Wheeler	*	Staff	$\frac{1}{10}$ "	$\frac{1}{100}$ "
East Canada creek:						
Dolgeville, below dam	1898	Godfrey Aman	*	"	$\frac{1}{10}$ "	$\frac{1}{100}$ "
Dolgeville, above dam	1898	Godfrey Aman	*	"	$\frac{1}{10}$ "	$\frac{1}{100}$ "
West Canada creek:						
Kast Bridge	May 15, 1904	Lloyd Kast	414.24	Tape	$\frac{1}{100}$ "	$\frac{1}{100}$ "
Poland	July 3, 1908	Clarence Fitch	*	Chain	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Trenton Falls, Morgan dam	Feb. 8, 1904	Chas. W. Young	751.26[a]	Staff	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Trenton Falls, Power Co.'s dam	"	Chas. W. Young	1,009.48	"	Inch	Inch
Grant, Twin Rock bridge	Sept. 7, 1909	Frank McArthur	1,135.07	Tape	$\frac{1}{100}$ foot	$\frac{1}{100}$ foot
Near Wilmurt	June 28, 1909	Ray Hubbard	*	Chain	$\frac{1}{10}$ "	$\frac{1}{10}$ "
Nine-Mile creek — Stittville	Nov. 4, 1905	Maria Powell	481.72	"	$\frac{1}{10}$ "	$\frac{1}{10}$ "

* Arbitrary datum. [a] Weather Bureau datum. [b] U. S. G. S. datum.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River at Waterford, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	15.85	14.35	14.65	20.70	17.15	16.45	14.55	14.55	15.10	15.25	15.70	15.05
2.....	15.70	14.10	14.75	20.95	16.65	15.90	14.85	14.55	15.20	15.15	15.60	15.10
3.....	15.60	14.10	14.35	20.35	16.45	16.20	14.80	14.80	15.30	15.20	15.55	15.00
4.....	15.35	14.10	14.35	19.00	16.30	15.80	14.90	15.25	15.15	15.20	15.75	18.05
5.....	14.95	14.20	14.30	18.55	16.00	15.75	14.70	14.90	14.95	15.05	15.60	17.55
6.....	15.45	14.45	14.20	20.95	16.15	15.60	14.85	14.70	15.00	14.95	15.45	17.00
7.....	15.00	14.25	14.20	21.95	15.85	15.20	14.50	14.85	14.85	14.90	15.55	17.50
8.....	15.00	14.25	14.35	24.15	16.20	15.15	14.20	15.05	14.95	14.75	16.55	17.45
9.....	14.90	14.20	14.45	23.55	15.75	15.00	14.25	15.15	14.95	14.60	19.20	17.05
10.....	14.55	14.20	14.60	21.10	15.80	14.65	14.45	15.10	14.90	14.45	18.60	16.45
11.....	14.85	14.15	14.60	20.25	15.55	14.40	14.70	15.30	14.95	14.55	17.70	16.05
12.....	14.65	14.05	14.60	19.20	15.50	14.40	14.60	15.35	14.75	14.70	17.05	16.05
13.....	14.68	14.20	16.17	18.60	15.25	14.30	14.75	15.20	14.60	15.35	16.75	16.25
14.....	14.60	14.05	17.67	18.85	15.15	14.30	14.75	15.20	14.50	15.15	16.50	15.75
15.....	14.35	14.00	18.70	19.10	15.55	14.15	14.55	15.20	14.55	15.05	16.75	15.25
16.....	14.45	14.10	20.40	19.70	15.40	14.25	14.30	15.10	14.85	15.10	16.75	15.50
17.....	14.25	14.00	18.80	20.85	15.45	14.30	14.45	15.10	15.30	15.05	16.55	15.35
18.....	14.25	14.00	18.83	21.35	16.05	14.25	14.25	15.15	15.40	14.85	16.40	15.45
19.....	14.35	14.00	18.90	21.55	16.60	14.25	14.45	15.30	15.50	14.85	16.05	15.50
20.....	14.45	14.35	19.45	21.35	16.30	14.20	14.15	15.15	15.80	15.10	15.90	16.05
21.....	14.65	14.25	18.90	20.05	16.00	14.05	14.10	15.10	15.50	14.90	15.70	16.50
22.....	14.70	14.40	17.30	19.30	17.15	13.95	14.05	15.20	15.40	15.10	15.65	16.20
23.....	14.75	14.40	16.60	19.15	17.95	14.10	14.25	15.10	15.40	14.95	15.55	16.05
24.....	14.60	14.75	16.75	19.80	17.30	14.05	14.20	15.20	15.30	16.75	15.30	15.95
25.....	14.35	14.75	16.35	19.70	16.85	14.65	14.10	15.20	15.05	18.80	15.80	15.50
26.....	14.30	14.60	15.95	18.75	16.60	14.55	14.30	15.25	16.30	18.55	15.95	15.35
27.....	14.45	14.95	15.55	18.05	16.30	14.05	14.45	15.20	16.35	18.15	15.95	15.30
28.....	14.15	14.90	15.45	17.90	15.85	14.55	15.05	15.05	16.00	17.25	15.65	17.05
29.....	14.05	14.80	17.10	17.80	15.55	15.15	14.95	15.15	15.75	16.65	15.45	15.10
30.....	14.40	......	21.00	17.40	15.95	14.90	14.55	15.20	15.25	16.50	15.40	15.10
31.....	14.10	......	20.30	......	16.30	......	14.40	15.15	......	16.05	......	15.70

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River above Dam at Cohoes, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	157.02	155.97	156.42	159.27	156.72	156.42	154.92	153.87	158.37	159.42	155.87	155.92
2.....	157.17	155.97	156.37	159.07	156.57	156.32	155.97	154.07	159.52	159.47	156.02	154.97
3.....	157.17	156.12	156.57	158.72	156.62	155.87	155.82	156.12	159.47	159.32	156.32	155.87
4.....	156.92	156.32	156.07	157.72	156.52	156.02	156.97	157.67	158.57	159.12	155.97	157.62
5.....	156.62	155.87	156.07	157.52	156.52	156.12	155.82	158.07	158.42	157.47	155.87	157.32
6.....	156.47	155.42	155.97	158.87	156.42	155.92	154.12	155.27	158.62	158.52	155.77	157.02
7.....	156.77	155.87	155.92	158.87	156.37	155.82	157.37	154.77	159.27	156.87	155.27	156.97
8.....	156.72	155.72	155.92	158.97	156.47	155.87	158.97	157.22	159.72	157.47	156.42	157.07
9.....	156.42	155.57	156.07	158.77	156.27	156.12	157.47	156.42	159.42	155.37	158.12	156.87
10.....	156.37	155.97	156.52	158.12	156.22	156.02	155.07	155.67	159.37	154.97	157.72	156.32
11.....	156.42	156.82	156.32	157.87	156.37	155.52	154.87	157.37	159.12	154.67	157.17	156.22
12.....	156.32	155.87	156.32	157.57	156.27	155.42	155.27	158.72	157.57	155.62	156.72	156.32
13.....	156.97	155.22	156.52	157.52	155.97	155.87	152.92	158.17	155.92	159.62	156.42	156.47
14.....	157.12	155.22	156.77	157.77	155.77	155.47	156.52	158.52	154.07	159.02	156.17	156.27
15.....	156.22	155.22	157.02	157.82	155.87	155.37	157.47	158.62	158.92	155.97	156.27	156.72
16.....	156.07	155.17	157.92	158.37	155.92	155.82	156.62	158.47	158.62	157.42	156.52	156.37
17.....	155.92	155.77	158.92	158.52	156.02	155.32	156.22	157.92	159.07	156.12	156.72	156.37
18.....	156.02	155.82	158.22	158.42	156.57	155.87	159.02	159.27	159.52	155.92	156.22	156.47
19.....	156.07	155.02	158.42	158.12	156.67	155.72	158.47	158.27	159.67	154.32	155.97	156.22
20.....	156.17	155.27	158.62	158.32	156.52	155.52	157.72	158.52	159.82	154.57	156.07	156.52
21.....	156.57	155.37	158.42	158.37	156.27	155.42	158.42	158.27	159.77	156.17	156.17	156.92
22.....	156.47	156.02	157.12	158.12	156.57	155.52	158.17	155.97	159.87	156.27	156.02	157.07
23.....	156.27	156.47	157.07	158.02	157.12	155.82	155.22	156.02	159.72	155.67	156.07	156.82
24.....	156.32	156.67	157.02	157.87	156.32	154.72	153.37	157.12	159.52	156.17	156.22	156.52
25.....	156.22	156.82	156.82	157.57	156.42	154.97	153.72	157.42	159.32	157.77	156.17	156.67
26.....	156.17	156.37	156.47	158.12	156.62	153.82	155.07	157.22	160.42	157.77	156.27	156.52
27.....	156.22	156.62	156.32	156.92	156.12	156.62	155.67	153.37	160.12	157.62	156.32	156.87
28.....	156.17	156.57	156.32	157.07	155.92	157.42	158.67	149.27	159.97	156.87	156.47	156.87
29.....	156.02	156.62	156.87	156.97	155.87	157.07	157.42	156.27	159.87	156.72	156.12	156.87
30.....	155.87	......	159.37	156.87	156.27	157.67	156.92	155.47	159.29	156.47	156.12	156.22
31.....	155.87	......	159.02	......	155.87	......	155.87	153.52	......	156.07	......	156.22

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River at Dunsbach Ferry, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	175.98	174.33	175.28	180.03	176.28	175.43	174.13	*a*	*a*	*a*	171.74	171.74
2.....	175.73	174.33	175.23	179.68	176.23	175.48	174.13	*a*	*a*	*a*	171.74	172.04
3.....	175.63	174.33	175.23	179.03	176.38	175.63	174.13	*a*	*a*	*a*	171.64	172.64
4.....	175.33	174.23	175.13	178.28	176.58	175.68	174.13	*a*	*a*	*a*	171.54	174.34
5.....	175.43	174.23	175.13	177.43	176.48	175.58	174.13	*a*	*a*	*a*	171.54	173.84
6.....	175.23	174.23	175.18	179.63	176.13	175.48	174.13	*a*	*a*	*a*	171.34	173.44
7.....	175.23	174.13	175.48	179.98	175.88	175.33	174.13	*a*	*a*	*a*	171.54	173.04
8.....	175.13	174.13	175.83	180.88	175.88	175.13	174.13	*a*	*a*	*a*	172.14	172.84
9.....	175.13	174.08	176.03	179.68	176.03	174.98	174.13	*a*	*a*	*a*	174.64	172.64
10.....	175.08	174.03	176.08	178.48	175.78	174.93	174.13	*a*	*a*	*a*	173.84	172.44
11.....	175.03	174.03	176.13	178.13	175.38	174.83	174.13	*a*	*a*	*a*	173.34	172.34
12.....	175.03	174.08	176.33	177.63	175.28	174.73	174.13	*a*	*a*	*a*	172.94	172.54
13.....	175.03	174.13	176.43	177.43	175.08	174.68	174.13	*a*	*a*	*a*	172.84	172.74
14.....	174.98	174.18	176.53	177.58	175.03	174.63	174.13	*a*	*a*	*a*	172.64	173.04
15.....	174.93	174.23	176.53	178.28	175.23	174.73	174.13	*a*	*a*	171.34	172.44	172.94
16.....	174.93	174.23	180.03	178.93	175.23	174.78	174.13	*a*	*a*	171.29	172.34	172.94
17.....	174.88	174.33	184.13	179.03	175.28	174.83	174.13	*a*	*a*	171.44	171.94	172.94
18.....	174.83	174.33	178.98	178.98	175.48	174.83	*a*	*a*	*a*	171.54	171.94	172.74
19.....	174.83	174.33	178.08	178.93	175.78	174.73	*a*	*a*	*a*	171.79	171.94	172.44
20.....	174.83	174.38	177.83	178.33	176.13	174.73	*a*	*a*	*a*	171.84	171.94	172.34
21.....	174.83	174.43	178.03	177.78	176.03	174.63	*a*	*a*	*a*	172.29	171.74	172.84
22.....	174.73	174.48	177.93	177.38	176.13	174.53	*a*	*a*	*a*	172.89	171.64	172.94
23.....	174.73	174.58	177.38	177.38	176.03	174.48	*a*	*a*	*a*	172.29	171.54	173.44
24.....	174.73	174.83	176.83	177.98	175.93	174.38	*a*	*a*	*a*	172.49	171.54	173.54
25.....	174.73	174.83	176.68	177.63	175.98	174.33	*a*	*a*	*a*	173.79	171.74	173.54
26.....	174.73	174.93	176.58	177.18	175.98	174.28	*a*	*a*	*a*	173.54	172.04	173.34
27.....	174.73	175.13	176.53	176.63	175.73	174.23	*a*	*a*	*a*	172.94	172.04	173.34
28.....	174.53	175.23	176.63	176.43	175.78	174.23	*a*	*a*	*a*	172.64	171.84	173.34
29.....	174.43	175.33	176.93	176.48	175.78	174.18	*a*	*a*	*a*	172.34	171.74	173.34
30.....	174.38	......	179.78	176.48	175.53	174.13	*a*	*a*	*a*	171.94	171.74	173.34
31.....	174.33	......	178.98	......	175.48	......	*a*	*a*	......	171.84	......	173.34

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River above State Dam Rexford, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	210.56	209.56	209.56	214.81	211.16	209.96	209.16	208.66	210.16	210.81	210.96	211.46
2.....	210.46	209.56	209.56	214.41	211.06	209.96	209.16	208.66	210.16	210.66	210.96	211.46
3.....	210.46	209.56	209.56	213.66	210.96	210.21	209.16	208.66	210.06	211.41	210.96	213.91
4.....	210.21	209.56	209.56	212.46	210.86	210.31	209.16	208.66	210.06	211.26	211.06	213.56
5.....	210.11	209.56	209.56	211.61	210.66	210.21	209.16	208.66	210.06	210.66	211.06	212.81
6.....	209.96	209.56	209.56	214.11	210.51	210.06	209.16	208.66	210.16	210.76	211.06	212.01
7.....	209.86	209.56	209.55	213.76	210.36	210.01	209.16	208.66	210.16	210.96	211.06	211.86
8.....	209.86	209.56	209.56	213.56	210.21	209.96	209.16	208.66	210.16	210.91	213.06	211.76
9.....	209.76	209.56	209.56	213.21	210.11	209.96	209.16	208.66	210.16	210.81	214.51	211.76
10.....	209.66	209.56	209.56	212.91	210.06	209.96	209.16	208.66	210.16	210.76	213.26	211.76
11.....	209.66	209.56	209.76	212.56	210.06	209.86	209.16	208.66	210.16	210.96	212.56	211.76
12.....	209.66	209.56	209.86	212.21	210.16	209.86	209.16	208.66	210.16	211.31	212.16	211.66
13.....	209.66	209.56	210.46	212.21	210.76	209.76	209.16	208.66	210.16	211.26	211.71	211.66
14.....	209.66	209.56	211.06	212.51	210.86	209.76	209.16	208.66	210.36	210.96	211.56	211.66
15.....	209.61	209.56	211.51	212.56	210.66	209.66	209.16	208.66	210.31	211.26	211.71	211.66
16.....	209.56	209.56	215.51	212.46	210.41	209.61	209.16	208.66	210.16	210.96	211.71	211.66
17.....	209.56	209.56	213.56	213.51	210.21	209.51	209.16	208.66	210.16	210.86	211.66	211.66
18.....	209.56	209.56	212.66	213.31	210.21	209.41	209.16	208.66	210.16	210.86	211.46	211.66
19.....	209.56	209.56	212.66	213.31	210.41	209.36	209.16	208.66	210.16	210.86	211.46	212.06
20.....	209.56	209.56	212.16	212.91	211.36	209.26	209.16	208.66	210.21	210.86	211.36	212.66
21.....	209.56	209.56	211.81	212.61	211.26	203.16	209.16	208.66	210.36	211.36	211.26	212.21
22.....	209.56	209.56	211.46	212.31	211.11	209.16	209.16	208.66	210.66	210.86	211.26	211.96
23.....	209.56	209.56	211.16	212.11	210.96	209.11	209.06	208.66	210.21	211.06	211.51	211.66
24.....	209.56	209.56	211.56	211.86	210.71	209.06	208.96	208.66	210.21	212.31	211.76	211.41
25.....	209.51	209.56	210.86	211.66	210.46	209.11	208.96	208.66	211.16	213.76	211.66	211.36
26.....	209.56	209.56	210.76	211.46	210.21	209.26	208.96	208.66	212.64	213.46	211.81	211.26
27.....	209.56	209.56	210.26	211.36	210.06	209.16	208.96	208.66	212.26	212.86	211.76	211.16
28.....	209.56	209.56	211.81	211.36	209.96	209.16	208.96	208.66	211.71	212.41	211.66	211.16
29.....	209.56	209.56	212.61	211.26	209.86	209.16	208.96	208.66	211.01	212.11	211.55	211.16
30.....	209.56	......	214.51	211.16	209.86	209.16	208.96	208.66	210.31	211.46	211.56	211.16
31.....	209.56	......	214.26	......	210.06	......	208.96	208.66	......	211.11	......	211.16

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River at Schenectady, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	211.16	210.06	210.06	219.51	212.26	210.56	209.66	209.56	209.41	211.31	211.36	211.21
2.....	211.16	210.06	210.06	217.91	211.76	210.26	209.66	209.56	209.66	211.21	211.31	210.16
3.....	210.86	210.06	210.06	216.86	211.66	210.06	209.66	209.56	209.86	211.66	211.26	214.26
4.....	210.86	210.06	210.06	214.51	211.46	210.41	209.56	209.56	209.71	211.56	211.51	215.01
5.....	210.86	210.06	210.06	213.91	211.06	210.36	209.56	209.56	210.01	211.26	211.16	213.81
6.....	210.86	210.06	210.06	218.16	211.06	210.01	209.56	209.61	210.46	210.91	211.01	213.16
7.....	210.86	210.06	210.06	218.56	211.56	209.66	209.56	209.81	210.56	210.51	210.86	213.91
8.....	210.76	210.06	210.06	220.16	211.41	209.26	209.56	209.86	210.66	210.51	214.16	213.61
9.....	210.76	210.06	210.16	217.56	211.06	209.96	209.56	209.86	210.76	210.36	215.91	212.86
10.....	210.66	210.06	210.66	214.96	210.66	209.81	209.56	209.86	210.41	210.26	214.16	212.26
11.....	210.61	210.06	210.66	214.81	210.51	209.56	209.56	209.86	210.21	210.11	213.06	211.86
12.....	210.46	210.06	210.66	213.51	210.31	209.51	209.56	209.81	209.66	211.06	212.21	211.86
13.....	210.26	210.06	210.66	213.61	210.11	209.46	209.46	209.66	209.56	211.76	212.16	211.86
14.....	210.06	210.06	211.31	214.16	209.91	209.51	209.56	209.86	209.91	211.56	211.96	211.86
15.....	210.06	210.06	211.66	215.06	210.11	209.51	209.56	209.86	210.21	211.26	212.26	211.66
16.....	210.06	210.06	219.46	216.01	210.01	209.56	209.66	209.86	210.16	211.21	212.51	211.86
17.....	210.06	210.06	214.16	216.81	210.31	209.56	209.56	209.66	210.41	211.36	212.16	211.96
18.....	210.06	210.06	214.36	216.36	211.51	209.56	209.66	209.66	211.61	210.61	211.66	211.66
19.....	210.06	210.06	215.21	216.51	211.41	209.51	209.66	209.66	211.16	210.41	211.26	211.66
20.....	210.06	210.06	216.66	215.86	211.31	209.46	209.66	209.66	211.41	210.91	211.61	213.41
21.....	210.06	210.06	215.01	214.06	211.41	209.41	209.66	209.66	211.51	212.01	211.66	213.21
22.....	210.06	210.06	212.96	212.51	212.76	209.31	209.66	209.66	211.06	210.96	211.46	211.76
23.....	210.06	210.06	212.46	213.96	212.46	209.26	209.56	209.66	210.91	211.16	211.31	212.36
24.....	210.06	210.06	211.96	215.46	212.51	209.16	209.66	209.56	210.56	212.86	211.21	211.96
25.....	210.06	210.06	211.56	213.86	211.41	209.36	209.66	209.46	211.96	214.96	211.56	211.56
26.....	210.06	210.06	211.16	212.91	210.51	209.61	209.66	209.46	213.31	214.61	212.16	211.31
27.....	210.06	210.06	210.66	212.31	210.06	209.66	209.66	209.41	212.71	214.11	212.11	211.06
28.....	210.06	210.06	210.66	212.26	209.96	209.66	209.56	209.36	212.21	212.71	211.96	211.16
29.....	210.06	210.06	212.91	212.71	209.76	209.66	209.56	210.26	211.16	212.51	211.61	211.26
30.....	210.06	......	218.31	212.41	209.86	209.66	209.56	209.61	210.86	212.01	211.36	211.16
31.....	210.06	......	216.46	......	211.26	......	209.56	209.41	......	211.66	......	211.71

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River at Tribes Hill, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	269.71	267.11	267.91	274.01	271.16	269.66	268.01	267.71	267.91	268.81	268.76	268.61
2.....	269.91	267.11	267.71	275.71	271.11	269.71	268.01	267.71	267.91	268.81	268.71	269.16
3.....	269.71	267.01	267.71	273.71	270.76	269.71	268.01	267.81	267.91	268.91	268.81	273.01
4.....	269.51	267.01	267.71	273.01	270.31	269.71	268.01	267.81	268.01	268.81	268.91	271.61
5.....	269.21	267.01	267.91	273.01	270.16	269.41	268.01	267.81	268.16	268.71	268.91	271.16
6.....	269.01	266.91	267.91	274.01	270.31	269.21	267.96	267.81	268.31	268.61	268.76	271.26
7.....	268.91	266.91	268.11	275.51	270.21	269.11	267.86	267.81	268.41	268.51	268.71	271.61
8.....	268.81	266.91	268.11	276.51	270.01	269.01	267.81	267.81	268.46	268.26	272.11	271.16
9.....	268.71	266.81	268.11	274.36	269.66	268.91	267.81	267.96	268.46	268.21	272.76	269.86
10.....	268.61	266.81	268.11	273.36	269.46	268.71	267.81	267.91	268.31	268.16	270.61	269.46
11.....	268.51	266.81	268.11	273.11	269.41	268.71	267.81	267.91	268.31	268.11	270.26	269.86
12.....	268.31	266.81	268.31	272.81	269.31	268.76	267.81	267.96	268.21	268.21	269.86	269.86
13.....	268.21	266.81	269.31	272.41	269.21	268.71	267.81	268.16	268.11	268.16	269.61	269.11
14.....	268.21	266.71	270.51	272.66	269.01	268.66	267.81	268.31	268.11	268.21	269.91	268.96
15.....	268.11	266.71	271.71	273.21	269.01	268.71	267.91	268.26	268.31	268.16	270.26	269.06
16.....	268.11	266.71	274.71	274.21	269.11	268.61	267.91	268.11	268.51	268.21	269.71	269.11
17.....	268.01	266.71	272.86	274.56	270.01	268.61	267.91	268.01	269.41	268.21	269.61	269.26
18.....	268.01	266.71	272.91	274.16	270.91	268.61	267.91	268.01	269.31	268.21	269.36	269.21
19.....	267.91	266.71	273.26	273.51	270.61	268.61	267.91	268.01	268.71	268.31	269.21	269.46
20.....	267.91	266.71	274.01	273.41	270.21	268.51	267.91	268.11	269.01	269.06	269.31	270.01
21.....	267.81	267.01	273.41	272.61	270.31	268.36	267.91	268.16	269.31	269.41	269.26	270.16
22.....	267.71	267.31	271.26	272.71	270.71	268.26	267.91	268.16	269.21	269.06	269.26	270.11
23.....	267.71	267.31	271.51	273.06	270.56	268.21	267.86	267.96	269.01	269.21	269.31	269.91
24.....	267.61	267.31	271.21	273.31	270.41	268.21	267.86	267.81	269.01	270.46	269.36	269.76
25.....	267.41	267.31	270.61	272.61	270.16	268.16	267.91	267.96	270.16	271.86	269.81	269.56
26.....	267.41	267.31	270.21	272.21	269.81	268.11	267.91	268.01	270.76	271.71	269.71	269.26
27.....	267.31	267.91	269.76	271.61	269.76	268.06	267.91	268.01	270.31	271.36	269.41	269.26
28.....	267.31	267.91	271.01	271.11	269.86	268.01	267.91	268.01	269.61	270.46	269.21	269.31
29.....	267.31	267.91	272.91	271.36	269.81	268.01	267.86	267.91	269.11	269.86	269.06	269.56
30.....	267.21	......	275.51	271.61	269.71	268.01	267.81	267.91	268.91	269.36	269.01	270.01
31.....	267.11	......	275.21	......	269.96	......	267.71	267.91	......	268.81	......	270.56

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Schoharie Creek at Fort Hunter, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	281.90	280.80	281.70	283.75	282.20	281.70	279.05	278.30	279.75	280.55	281.85	281.80
2.....	281.85	280.80	281.55	283.80	282.15	281.65	278.95	278.30	279.70	280.50	281.70	282.05
3.....	281.80	280.80	281.50	283.45	282.10	281.70	278.85	278.50	279.85	280.55	281.85	283.65
4.....	281.70	280.80	281.50	283.10	282.10	281.75	278.65	278.65	280.60	280.45	281.65	283.40
5.....	281.55	280.70	281.50	283.10	281.95	281.75	278.65	278.55	280.90	279.40	281.65	283.25
6.....	281.30	280.70	281.40	283.65	281.95	281.65	278.70	278.40	281.05	279.10	281.70	283.05
7.....	281.20	280.70	281.40	284.15	282.15	281.60	278.70	278.30	281.05	279.00	281.65	282.85
8.....	281.20	280.70	281.40	284.15	281.95	281.60	278.70	278.25	279.55	278.95	282.80	282.45
9.....	281.10	280.60	281.45	284.45	281.80	281.60	278.70	278.20	279.05	278.90	282.60	282.30
10.....	281.05	280.50	281.65	283.65	281.80	281.60	278.70	278.45	279.00	278.90	282.35	282.20
11.....	281.00	280.50	281.65	283.05	281.80	281.50	278.60	278.65	278.90	279.05	282.20	282.10
12.....	281.00	280.50	281.50	282.85	281.80	281.45	278.60	278.65	278.90	280.25	281.95	282.00
13.....	280.90	280.50	281.70	282.80	281.65	281.35	278.60	281.40	278.80	281.15	281.85	281.90
14.....	280.80	280.50	283.40	282.80	281.75	281.30	279.50	280.80	278.95	281.90	281.90	281.90
15.....	280.80	280.40	283.50	281.80	281.80	281.05	279.30	279.95	279.25	281.60	281.95	281.80
16.....	280.80	280.40	286.75	283.35	281.85	280.85	279.05	279.50	279.50	281.15	281.85	281.80
17.....	280.70	280.40	283.65	284.45	282.30	280.70	278.85	279.15	281.30	280.30	281.80	281.70
18.....	280.70	280.30	283.15	283.90	282.45	280.50	278.65	279.00	281.70	279.85	281.75	281.70
19.....	280.70	280.30	283.20	283.55	282.30	280.25	278.35	278.90	281.55	279.60	281.65	281.90
20.....	280.60	280.30	283.20	283.15	282.10	280.10	278.20	279.20	281.50	279.95	281.90	282.15
21.....	281.85	280.45	283.00	282.70	281.90	280.00	278.85	279.25	281.40	279.80	281.80	282.15
22.....	281.95	280.65	282.80	282.70	281.95	279.85	278.95	279.05	281.30	279.70	281.75	281.95
23.....	281.85	280.90	282.40	282.65	282.00	279.75	278.75	279.30	281.05	279.65	281.70	281.85
24.....	281.80	281.00	282.25	282.60	281.85	279.60	278.70	279.30	280.90	282.20	281.75	281.70
25.....	281.70	281.25	282.10	282.50	281.80	279.30	278.70	279.25	281.40	283.65	282.05	281.65
26.....	281.55	281.35	282.00	282.45	281.80	278.95	278.70	279.30	282.60	282.85	282.10	281.55
27.....	281.45	281.65	282.00	282.25	281.70	278.95	278.60	280.45	282.20	282.15	282.00	281.40
28.....	281.35	281.70	281.95	282.05	281.60	279.05	278.50	279.80	281.45	282.00	281.95	281.30
29.....	281.30	281.70	281.95	281.85	281.60	279.10	278.55	279.05	280.75	281.90	281.90	281.25
30.....	281.15	......	284.15	281.80	281.60	279.10	278.45	279.05	280.45	281.85	281.80	281.45
31.....	280.95	......	283.40	......	281.65	......	278.35	279.40	......	281.75	......	282.45

Mean Daily Elevation of Water-surface (U. S. G. S. Datum) of Schoharie Creek at Schoharie Junction, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	De
1912.												
1.....	568.54	568.78	570.91	573.96	569.11	568.34	566.71	566.56	566.91	567.26	568.21	568.16
2.....	568.51	568.76	569.86	573.86	569.08	568.24	566.71	566.56	567.01	567.24	568.16	571.86
3.....	568.51	568.76	569.61	573.21	568.81	568.11	566.71	566.56	567.01	567.14	568.21	570.06
4.....	568.64	568.71	569.48	571.31	568.68	567.98	566.68	566.54	567.06	567.11	568.08	569.81
5.....	568.81	568.71	569.36	571.96	568.64	567.96	566.66	566.51	567.06	567.11	568.06	569.51
6.....	569.51	568.68	569.74	573.01	568.91	567.91	566.66	566.51	567.06	567.16	568.06	570.36
7.....	569.34	568.66	569.31	572.81	568.64	567.88	566.68	566.48	567.06	567.14	568.06	569.61
8.....	569.28	568.64	569.26	573.81	568.58	567.81	566.68	566.46	567.06	567.14	569.96	569.31
9.....	569.36	568.61	571.41	571.61	568.48	567.81	566.78	566.46	567.04	567.06	569.96	569.06
10.....	569.34	568.61	571.76	571.26	568.44	567.76	566.78	566.46	567.01	566.96	569.21	568.81
11.....	569.24	568.56	570.76	570.91	568.34	567.68	566.78	567.81	567.01	566.96	568.81	568.68
12.....	569.14	568.56	570.36	571.11	568.21	567.64	566.78	568.06	567.01	567.06	568.64	568.58
13.....	569.04	568.56	575.46	570.86	568.08	567.58	566.76	567.41	567.01	567.71	568.61	568.48
14.....	568.94	568.51	573.41	570.46	568.08	567.54	566.76	567.28	567.01	567.36	568.58	568.38
15.....	568.84	568.51	573.71	570.58	567.98	567.46	566.74	567.14	566.96	567.16	568.54	568.28
16.....	568.76	568.51	577.96	572.91	568.36	567.41	566.74	567.01	567.46	567.11	568.48	568.18
17.....	568.76	568.51	572.46	572.81	568.46	567.34	566.66	566.96	567.46	567.11	568.41	568.11
18.....	568.76	568.51	572.51	572.51	569.51	576.26	566.66	566.91	567.38	567.06	568.48	568.06
19.....	568.86	568.51	572.01	572.04	569.01	567.21	566.64	566.86	567.34	567.01	568.16	568.16
20.....	570.06	568.58	570.91	571.44	568.86	567.14	566.64	566.86	567.61	566.98	568.08	568.66
21.....	569.78	568.66	570.54	570.46	568.91	567.06	566.64	566.86	567.24	566.96	568.06	568.41
22.....	569.51	570.76	570.36	570.21	569.14	566.98	566.64	566.96	567.11	566.96	567.91	568.36
23.....	569.38	571.71	569.76	569.86	569.41	566.96	566.61	567.06	567.06	567.06	567.76	568.26
24.....	569.24	571.46	569.26	569.54	568.71	566.94	566.61	567.18	567.21	570.51	567.76	568.26
25.....	569.11	572.16	569.01	569.28	568.51	566.91	566.61	567.26	567.46	570.86	568.71	568.26
26.....	569.04	572.61	568.81	569.14	568.41	566.86	566.58	567.26	567.46	570.51	568.54	568.24
27.....	568.94	572.36	568.71	568.91	568.34	566.84	566.58	567.18	567.46	569.61	568.44	568.31
28.....	568.88	572.21	568.86	568.84	568.11	566.81	566.58	567.14	567.38	569.06	568.34	568.36
29.....	568.86	572.08	573.41	568.81	568.11	566.78	566.56	567.04	567.34	568.74	568.24	568.36
30.....	568.86	......	574.31	569.34	568.41	566.78	566.56	566.94	567.34	568.41	568.14	568.36
31.....	568.81	......	574.26	......	568.44	......	566.56	566.86	......	568.26	......	568.36

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River at Fultonville Bridge, Fonda, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	279.09	277.19	276.84	280.69	277.59	275.69	273.94	273.39	273.49	275.19	275.14	274.04
2.....	278.79	277.19	276.94	280.24	277.64	275.69	273.69	273.49	273.69	275.09	275.04	274.59
3.....	278.14	277.04	276.99	280.29	277.69	275.94	273.69	273.59	273.69	274.99	274.94	279.89
4.....	277.94	276.84	276.79	279.89	276.94	276.19	273.59	273.69	274.19	274.89	274.89	279.99
5.....	277.69	276.64	276.69	279.89	276.69	275.54	273.59	273.69	274.69	274.79	274.89	279.69
6.....	277.64	276.44	276.54	*a*	276.69	275.19	273.49	273.79	274.69	274.69	274.79	279.04
7.....	277.49	276.24	276.19	*a*	277.49	275.19	273.49	273.89	274.69	274.69	277.34	278.44
8.....	277.19	276.04	276.29	*a*	277.39	275.19	273.39	273.79	274.69	274.69	280.09	278.19
9.....	277.19	275.84	276.09	*a*	276.99	274.44	273.49	273.69	273.89	275.24	279.59	278.19
10.....	277.19	275.69	276.09	*a*	276.59	274.24	273.49	273.69	274.04	274.19	278.99	277.69
11.....	277.19	275.69	276.09	*a*	276.04	274.79	273.49	273.69	273.64	273.69	278.14	276.94
12.....	277.19	275.69	276.09	*a*	275.29	274.69	273.59	273.69	273.74	273.69	277.09	276.04
13.....	277.19	275.69	*a*	*a*	274.79	274.69	273.59	273.69	273.89	275.69	276.69	275.14
14.....	277.19	275.69	*a*	*a*	274.69	274.84	273.59	273.69	273.99	275.14	277.34	275.09
15.....	277.19	275.69	*a*	*a*	274.69	274.69	273.69	273.69	273.69	274.84	277.29	276.69
16.....	277.19	275.69	*a*	*a*	274.94	274.74	273.69	273.79	273.69	274.69	274.84	276.89
17.....	277.19	275.69	*a*	*a*	276.29	274.44	273.69	273.89	275.69	274.44	276.29	276.44
18.....	277.19	275.69	*a*	*a*	277.54	275.14	273.69	273.89	275.24	274.14	276.09	276.49
19.....	277.19	275.69	*a*	*a*	276.84	274.84	273.69	273.79	274.94	273.94	276.19	277.94
20.....	277.19	275.69	*a*	*a*	276.94	274.69	273.79	273.69	275.19	275.29	276.09	277.94
21.....	277.19	275.69	*a*	*a*	277.14	274.64	273.69	273.69	275.34	275.29	275.74	277.69
22.....	277.19	275.69	*a*	*a*	279.69	274.39	273.69	274.09	274.89	275.34	275.19	277.44
23.....	277.19	275.69	*a*	*a*	278.99	274.04	273.69	274.69	274.79	275.59	275.19	277.09
24.....	277.19	275.94	*a*	*a*	277.54	273.89	273.69	273.49	274.69	276.79	274.99	276.89
25.....	277.19	276.14	*a*	*a*	276.39	273.79	273.69	273.49	277.74	279.44	274.89	276.59
26.....	277.19	276.34	*a*	280.44	275.99	273.79	273.69	273.49	276.59	279.19	276.19	276.44
27.....	277.19	276.54	*a*	279.44	275.69	273.79	273.69	273.59	274.79	278.09	276.19	276.34
28.....	277.19	276.74	*a*	278.44	275.69	273.89	273.59	273.69	275.19	277.54	275.99	276.24
29.....	277.19	276.69	*a*	278.44	275.69	273.94	273.49	273.69	275.49	276.69	275.89	276.04
30.....	277.19	......	*a*	278.24	275.69	274.14	273.49	273.69	275.19	276.44	275.24	275.89
31.....	277.19	......	*a*	......	275.79	......	273.39	273.69	......	275.34	......	275.89

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River at Canajoharie, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	289.45	284.55	285.55	301.20	287.40	286.55	286.10	286.10	286.15	......	285.95	285.70
2.....	288.45	284.55	285.55	292.55	287.15	286.55	286.15	286.05	286.05	......	286.20	288.10
3.....	287.70	284.55	285.45	290.85	287.00	286.45	286.15	285.95	286.15	......	286.15	287.70
4.....	287.05	284.45	285.50	289.00	286.20	286.35	286.05	285.85	286.00	......	285.95	287.25
5.....	286.45	284.45	285.35	288.80	286.25	286.05	286.00	286.00	286.05	......	286.10	286.45
6.....	285.80	284.45	285.15	292.85	286.15	285.80	285.90	285.95	286.00	......	286.00	285.85
7.....	285.65	284.45	285.15	295.15	287.15	286.85	285.45	285.95	286.05	......	286.05	285.45
8.....	285.50	284.45	285.05	290.75	286.55	286.25	285.85	285.75	286.15	......	290.50	284.95
9.....	285.95	284.45	285.05	293.10	286.10	286.00	285.40	285.95	285.35	......	289.55	284.95
10.....	285.95	284.45	284.95	290.85	286.05	285.50	285.25	285.95	285.85	......	287.55	284.90
11.....	285.50	284.45	284.90	289.60	285.90	285.95	285.45	286.00	286.10	......	286.70	284.35
12.....	285.35	284.45	284.85	288.65	286.05	286.00	284.05	285.95	286.05	......	286.25	284.20
13.....	285.35	285.45	284.90	288.90	285.65	285.95	284.60	286.05	286.05	......	286.00	284.95
14.....	285.25	284.45	285.75	290.95	285.65	285.90	285.25	285.95	286.05	......	285.95	284.40
15.....	285.25	284.45	285.85	291.40	284.95	286.20	285.30	285.85	286.05	......	285.90	284.05
16.....	285.25	284.45	290.05	292.85	285.25	285.95	286.00	285.95	286.05	......	285.75	284.90
17.....	284.95	284.35	290.25	293.80	286.30	286.00	285.95	286.00	287.45	286.15	285.15	283.20
18.....	284.70	284.35	290.90	293.15	287.10	285.85	286.00	285.85	286.20	286.10	284.90	282.25
19.....	284.95	284.45	293.10	293.70	286.85	285.90	285.80	286.10	286.15	286.05	285.00	282.35
20.....	285.20	284.45	295.20	291.25	286.00	285.75	285.45	286.15	286.75	286.45	285.05	284.30
21.....	285.25	284.75	293.00	289.10	287.75	285.60	285.45	285.90	286.25	286.40	284.90	283.75
22.....	285.25	284.75	291.15	288.65	289.65	285.95	285.75	284.85	286.15	286.25	284.95	283.20
23.....	285.05	285.05	290.50	291.80	288.15	286.00	285.95	284.85	286.00	286.15	285.05	282.40
24.....	285.05	285.10	289.55	292.15	286.90	286.05	285.90	284.95	286.15	286.25	284.85	281.85
25.....	285.05	284.95	288.50	289.65	286.60	285.90	286.05	286.05	287.10	287.35	284.95	281.75
26.....	284.95	284.95	287.70	288.35	286.30	285.95	285.90	286.10	287.50	286.95	284.90	281.45
27.....	284.95	285.45	287.05	288.05	286.05	285.60	285.80	286.05	286.85	286.05	284.80	281.50
28.....	284.95	285.85	287.35	288.85	286.15	285.50	285.80	286.15	......	286.10	283.45	281.35
29.....	284.95	285.75	292.35	288.35	286.20	285.45	286.05	286.15	......	285.95	282.90	281.40
30.....	284.80	......	300.15	287.90	286.40	285.55	286.05	286.05	......	286.00	283.00	281.70
31.....	284.65	......	300.70	......	287.00	......	286.00	286.15	......	285.75	......	283.05

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River at Fort Plain, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	294.71	293.16	293.96	*a*	295.66	294.01	291.11	290.66	290.71	293.01	292.56	292.91
2	294.51	293.06	293.61	300.01	295.26	293.76	290.96	290.66	291.01	294.21	292.76	294.26
3	294.21	293.06	293.26	298.76	294.91	294.01	291.06	290.76	290.96	293.51	293.26	298.66
4	294.11	293.06	293.21	297.01	294.96	294.21	291.06	290.76	291.81	293.16	293.16	298.06
5	293.91	292.69	293.01	297.46	294.71	293.81	290.91	291.56	291.96	293.01	292.76	296.11
6	293.96	292.96	292.86	299.71	294.71	293.21	290.96	291.16	292.36	292.86	292.66	296.16
7	293.91	292.86	292.86	*a*	295.26	293.81	291.01	290.86	291.86	292.56	293.26	296.31
8	293.86	292.76	293.01	*a*	294.66	293.31	290.96	290.86	292.31	292.21	298.81	295.96
9	293.86	292.71	293.31	299.81	294.21	293.06	290.91	290.76	290.86	292.06	299.06	294.61
10	293.86	292.56	293.46	298.16	294.11	293.16	290.91	290.76	290.76	292.01	296.41	294.26
11	293.91	292.41	293.21	297.66	293.76	292.96	290.96	290.96	290.96	293.61	294.76	294.11
12	293.71	292.36	293.16	296.66	293.31	292.76	290.86	291.06	291.01	293.16	294.26	294.01
13	293.66	292.26	293.21	296.21	293.11	292.66	290.86	291.01	290.96	293.26	293.81	293.76
14	293.66	292.26	293.26	297.06	293.66	292.56	290.96	290.96	290.96	293.51	294.21	293.71
15	293.66	292.41	293.66	298.86	293.31	292.71	290.76	290.86	290.81	293.06	294.86	293.66
16	293.66	292.56	296.06	300.06	293.21	292.76	291.71	290.91	291.36	292.66	294.56	293.86
17	293.66	292.66	297.01	300.51	294.86	293.16	291.06	290.96	293.76	292.16	293.96	293.91
18	293.66	292.66	297.81	300.16	295.41	292.91	290.86	290.96	292.31	292.01	294.21	293.71
19	293.66	292.81	300.86	299.26	294.96	292.56	291.06	290.76	292.86	293.46	294.21	294.36
20	293.86	292.91	300.86	297.86	294.21	291.71	290.91	290.66	293.61	293.91	293.36	295.96
21	294.41	293.01	299.71	297.11	295.41	291.71	290.76	292.56	292.76	292.21	293.46	295.76
22	294.26	293.11	297.96	296.96	297.21	291.41	290.76	290.86	292.36	292.76	293.26	295.06
23	294.11	293.76	297.01	298.16	295.91	291.71	290.76	290.86	292.16	294.21	293.16	294.71
24	293.96	293.91	296.11	299.36	295.11	291.36	291.01	290.86	293.56	295.01	293.06	294.66
25	293.86	294.01	294.96	297.51	294.46	291.26	291.01	290.61	295.91	296.46	293.26	294.21
26	293.71	294.06	294.31	296.31	293.86	291.21	290.91	290.86	295.71	296.01	294.06	293.91
27	293.36	293.96	294.26	296.16	293.56	291.16	290.81	290.96	293.91	294.81	293.91	293.76
28	293.16	294.06	294.31	296.76	293.06	291.06	290.71	290.86	293.31	294.76	293.71	293.71
29	293.16	294.11	297.76	296.16	293.26	291.06	290.71	290.86	292.56	293.56	293.36	293.41
30	293.16	......	*a*	296.01	294.01	291.01	290.71	290.76	293.56	292.56	293.16	293.86
31	293.11	......	*a*	......	294.86	......	290.76	290.76	......	292.86	......	295.11

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River above State Dam at Little Falls, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	365.18	363.98	364.58	368.18	365.18	365.08	364.28	364.01	363.71	364.51	364.11	363.91
2	365.13	363.98	364.58	367.93	365.08	364.98	364.28	364.01	364.01	365.06	364.11	364.26
3	364.98	363.98	364.58	366.78	365.08	364.98	364.18	364.11	364.01	365.01	364.21	365.96
4	364.88	363.98	364.58	366.13	364.98	365.03	364.38	364.31	364.01	364.76	364.21	365.56
5	364.78	363.98	364.48	365.98	364.98	364.88	364.38	364.31	364.31	364.71	364.11	365.11
6	364.48	363.98	364.38	367.18	364.78	364.68	364.38	364.31	364.51	364.71	364.11	365.11
7	364.28	363.98	364.28	369.08	364.68	364.68	364.28	364.11	364.41	364.21	364.11	365.36
8	364.28	363.98	364.28	369.53	364.78	364.48	364.18	363.91	364.31	363.71	366.41	365.21
9	364.28	363.98	364.28	368.28	364.83	364.48	364.08	363.91	364.21	363.71	366.21	365.01
10	364.18	363.98	364.28	366.63	364.48	364.38	363.88	364.21	364.21	363.71	365.21	364.81
11	364.18	363.98	364.28	366.13	364.38	364.38	363.88	364.31	364.01	363.81	364.81	364.61
12	364.18	363.98	364.28	365.88	364.18	364.38	364.08	364.31	363.91	364.31	364.46	364.51
13	364.18	363.98	364.28	365.83	364.18	364.28	364.28	364.21	363.91	364.31	364.31	364.51
14	364.18	363.98	364.18	366.28	364.18	364.28	364.28	364.21	364.11	364.31	364.11	364.51
15	364.18	363.98	364.48	366.93	364.38	364.28	364.08	364.21	364.11	364.31	364.41	364.51
16	364.18	363.98	365.38	367.83	364.38	364.48	364.48	364.11	364.11	364.11	364.56	364.51
17	364.18	363.98	365.78	368.23	364.48	364.28	364.38	364.11	365.11	364.01	364.51	364.41
18	364.18	363.98	366.08	367.58	365.08	364.28	364.38	364.11	364.61	364.01	364.31	364.66
19	364.18	364.28	366.63	367.53	364.83	364.08	364.38	364.01	364.76	363.81	364.21	365.16
20	364.18	364.38	366.93	366.98	364.58	364.08	364.38	364.01	364.81	364.71	364.11	365.31
21	364.18	364.58	366.28	365.88	365.18	363.93	364.38	364.01	364.81	364.61	364.21	365.16
22	364.18	364.58	365.78	365.78	366.03	363.88	364.38	363.91	364.56	364.31	364.21	364.86
23	364.18	364.58	365.48	368.08	365.43	363.88	364.48	364.01	364.41	364.11	364.21	364.61
24	364.08	364.58	364.98	367.13	364.98	363.88	364.48	364.01	364.91	364.61	364.21	364.61
25	364.08	364.68	364.78	365.93	364.58	364.48	364.48	364.01	365.71	365.71	364.21	364.51
26	364.08	364.68	364.38	365.48	364.48	364.43	364.28	364.01	365.71	365.71	364.21	364.66
27	364.08	364.68	364.48	365.68	364.28	364.28	364.28	364.01	365.21	365.51	364.21	364.51
28	364.08	364.68	364.68	365.93	363.98	364.28	364.28	364.01	364.71	364.81	364.21	364.41
29	363.98	364.68	366.13	365.48	364.28	364.28	364.28	364.01	364.61	364.76	364.16	364.41
30	363.98	......	366.98	365.38	365.03	364.38	364.18	363.71	364.51	364.51	363.91	364.21
31	363.98	......	367.33	......	365.28	......	364.18	363.21	......	364.11	......	364.71

Mean Daily Elevation of Water-surface (Barge Canal Datum) of West Canada Creek at Kast Bridge, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	443.68	443.72	443.78	446.12	444.74	444.03	442.12	442.36	442.14	443.52	443.33	443.04
2	443.56	443.68	443.86	445.94	444.55	443.95	442.26	442.31	442.25	444.16	443.76	443.20
3	443.48	443.67	443.69	445.00	444.54	443.86	442.28	442.48	442.26	443.60	443.81	446.42
4	443.17	443.80	443.75	444.62	444.43	443.64	442.33	442.60	442.30	443.50	443.51	445.72
5	442.88	443.81	443.62	445.07	444.36	443.48	442.37	442.67	442.96	443.50	443.42	444.84
6	442.74	443.60	443.59	446.52	444.46	443.42	442.28	442.38	442.89	443.22	443.34	445.14
7	442.81	444.08	443.58	448.02	444.82	443.22	442.23	442.36	443.12	443.07	443.97	445.00
8	443.02	443.77	443.54	447.63	444.59	443.12	442.10	442.39	442.80	442.94	447.44	444.70
9	443.00	443.95	443.81	446.56	444.41	443.06	442.23	442.26	442.63	442.82	446.57	443.88
10	442.84	443.74	443.73	445.74	444.04	442.86	442.36	442.32	442.40	442.87	445.26	443.76
11	443.01	443.88	443.76	445.27	443.71	442.84	442.14	442.36	442.26	442.97	444.48	443.75
12	443.04	444.02	443.64	444.82	443.61	442.86	442.08	442.68	442.44	443.20	444.12	443.50
13	443.00	443.79	443.78	445.21	443.76	442.78	442.18	442.62	442.46	443.44	443.94	442.94
14	442.98	443.80	*a*	445.76	444.01	442.71	442.33	442.46	442.40	443.54	444.44	443.26
15	443.18	443.60	*a*	446.60	443.69	442.64	442.91	442.34	442.47	443.32	444.52	443.20
16	443.10	443.40	445.82	447.83	443.80	442.66	442.80	442.42	443.82	443.12	444.35	443.30
17	443.11	443.86	445.73	448.12	444.47	442.76	442.28	442.52	443.96	442.95	444.00	443.18
18	443.28	443.68	444.71	447.48	444.84	442.75	442.31	442.58	443.23	442.94	443.84	443.22
19	443.76	443.52	445.12	447.50	444.67	442.57	442.25	442.18	443.81	443.30	443.49	445.02
20	443.92	444.12	445.42	446.60	444.04	442.48	442.28	442.26	443.70	444.24	443.59	444.80
21	443.98	444.50	444.63	445.83	445.69	442.49	442.56	442.31	443.57	444.04	443.49	444.48
22	444.28	444.34	444.08	446.10	446.12	442.32	442.67	442.48	443.23	443.48	443.40	444.08
23	443.74	444.00	444.04	448.30	445.32	442.62	442.98	442.42	443.16	443.41	443.33	443.76
24	443.74	444.13	443.86	447.12	444.55	442.58	442.60	442.44	443.81	444.41	443.36	443.50
25	443.71	444.12	443.68	445.80	444.24	442.47	442.41	442.46	444.48	445.32	443.52	443.48
26	443.48	444.06	443.62	445.36	444.18	442.44	442.25	442.28	444.74	445.37	443.54	443.28
27	443.51	444.12	443.42	445.62	443.84	442.49	442.29	442.43	444.10	444.78	443.35	443.20
28	443.74	444.03	443.64	445.88	443.45	442.42	442.34	442.49	443.64	444.19	443.26	443.14
29	443.55	443.90	445.52	445.50	443.42	442.34	442.16	442.36	443.30	443.96	443.05	443.09
30	443.56	......	445.56	445.12	444.56	442.30	442.22	442.29	443.36	443.65	443.09	443.29
31	443.42	......	445.60	......	444.57	......	442.44	442.66	......	443.56	......	444.17

a Gage out of order.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of West Canada Creek above Morgan Dam at Trenton Falls, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	753.86	752.51	751.76	754.56	753.91	752.96	751.16	751.21	751.31	753.06	753.01	750.96
2	753.56	752.51	751.66	754.41	754.11	752.61	751.16	751.21	751.36	754.01	753.61	751.31
3	753.31	752.46	751.66	754.21	753.46	752.36	751.11	751.51	751.91	753.41	753.51	755.81
4	753.26	752.46	751.56	753.81	753.01	752.26	751.11	751.66	752.51	752.96	753.21	755.31
5	753.16	752.36	751.56	753.51	753.01	752.16	751.11	751.36	752.31	752.96	753.06	753.11
6	753.16	752.51	751.56	754.51	752.96	751.96	751.11	751.31	752.26	752.86	752.81	753.21
7	753.46	752.46	751.56	755.91	752.86	751.86	751.06	751.31	751.86	752.71	753.06	753.96
8	753.46	752.46	751.56	756.36	752.86	751.71	750.96	751.31	751.86	752.51	756.86	753.31
9	753.31	752.46	751.61	755.66	752.86	751.56	751.06	751.26	751.86	752.31	755.51	752.76
10	753.01	752.41	751.46	754.91	752.51	751.56	751.06	751.36	751.71	752.11	757.71	752.16
11	753.06	752.36	751.46	754.36	752.26	751.46	751.11	751.36	751.71	752.01	753.56	752.06
12	752.76	751.76	751.46	753.91	752.36	751.46	751.16	751.66	752.01	752.21	752.81	752.01
13	752.96	751.76	751.46	754.01	752.46	751.46	751.16	751.66	751.66	752.96	752.26	751.51
14	752.96	751.76	751.56	754.46	752.71	751.46	751.61	751.56	751.61	753.06	752.96	751.56
15	753.06	751.76	751.56	755.66	752.56	751.36	752.06	751.56	751.01	752.96	753.31	751.56
16	752.96	751.76	753.76	756.96	752.51	751.36	751.66	751.21	754.01	752.66	753.16	751.56
17	752.86	751.76	754.41	757.26	753.11	751.36	751.56	751.31	753.16	752.56	752.76	751.51
18	752.76	751.76	754.46	756.36	753.81	751.36	751.41	751.06	752.51	752.56	752.31	751.56
19	752.86	751.56	753.96	756.41	753.61	751.26	751.46	751.56	753.06	753.21	752.11	752.41
20	753.21	751.56	753.81	755.66	753.01	751.26	751.46	751.56	753.31	753.91	751.91	753.06
21	753.26	753.31	753.46	754.91	754.66	751.26	751.21	751.51	753.11	753.66	751.81	753.06
22	753.06	752.26	753.16	755.21	755.31	751.26	751.56	751.56	752.66	753.16	751.66	752.76
23	753.46	751.46	753.06	757.66	754.16	751.26	751.56	751.61	752.61	752.56	751.66	752.31
24	753.06	751.66	752.96	755.91	753.41	751.36	751.51	751.56	753.06	753.51	751.66	751.91
25	752.96	751.91	752.86	755.06	752.91	751.36	751.51	751.31	753.46	755.21	751.36	751.86
26	753.21	751.66	752.56	754.96	752.61	751.36	751.51	751.31	753.96	755.21	751.16	751.56
27	752.76	751.66	752.26	755.76	752.41	751.35	751.51	751.61	753.66	754.66	751.06	751.56
28	752.76	751.56	752.16	755.56	752.01	751.31	750.86	751.31	753.11	753.81	751.06	751.56
29	752.66	751.76	752.36	754.51	751.91	751.26	751.31	751.41	752.91	753.46	751.01	751.56
30	752.66	......	753.71	754.16	753.81	751.16	751.21	751.36	752.86	753.26	751.51	751.61
31	*a*	......	754.36	......	753.36	......	751.21	751.16	......	753.11	......	752.21

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of West Canada Creek above Power Co.'s Dam at Trenton Falls, N. Y.

DAY.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	1,019.86	1,017.65	1,018.06	1,019.52	1,019.27	1,018.77	1,009.27	1,012.19	1,009.48	1,019.60	1,019.60	1,019.27
2	1,019.56	1,017.23	1,018.48	1,019.56	1,019.52	1,018.52	1,014.81	1,015.15	1,015.65	1,020.31	1,020.15	1,019.36
3	1,019.52	1,017.81	1,019.31	1,019.44	1,018.86	1,018.31	1,017.23	1,016.40	1,019.36	1,019.94	1,020.06	1,022.10
4	1,019.36	1,019.27	1,017.23	1,019.02	1,018.73	1,018.19	1,018.44	1,019.56	1,019.65	1,019.73	1,019.73	1,021.23
5	1,019.31	1,016.77	1,016.65	1,018.86	1,019.48	1,017.98	1,013.44	1,015.94	1,019.31	1,019.73	1,019.65	1,020.52
6	1,018.98	1,017.98	1,014.73	1,019.73	1,019.06	1,017.90	1,016.19	1,011.52	1,019.40	1,019.73	1,019.52	1,020.86
7	1,019.48	1,016.48	1,014.44	1,021.15	1,019.15	1,017.73	1,016.69	1,010.10	1,019.48	1,019.52	1,019.81	1,020.73
8	1,018.98	1,017.65	1,016.02	1,021.69	1,019.23	1,017.77	1,011.65	1,009.27	1,019.48	1,019.36	1,023.27	1,020.40
9	1,018.90	1,017.02	1,014.94	1,020.69	1,018.98	1,017.81	1,011.36	1,009.23	1,013.48	1,019.27	1,021.98	1,019.69
10	1,018.69	1,017.48	1,019.36	1,019.98	1,018.60	1,017.48	1,012.40	1,012.52	1,011.94	1,019.27	1,021.98	1,019.73
11	1,018.81	1,019.65	1,016.94	1,019.44	1,018.40	1,017.48	1,010.94	1,015.31	1,011.48	1,019.27	1,020.31	1,019.73
12	1,017.69	1,017.23	1,013.81	1,019.06	1,018.44	1,017.23	1,015.40	1,016.31	1,016.56	1,020.36	1,020.02	1,019.40
13	1,018.40	1,017.19	1,012.94	1,019.02	1,018.40	1,016.81	1,012.10	1,014.73	1,013.06	1,019.90	1,019.81	1,019.19
14	1,019.94	1,016.52	1,015.40	1,019.90	1,018.52	1,016.56	1,015.48	1,012.69	1,012.27	1,019.77	1,020.10	1,019.40
15	1,018.65	1,013.31	1,016.27	1,020.48	1,018.40	1,017.02	1,019.19	1,013.77	1,009.60	1,019.56	1,020.27	1,019.56
16	1,018.40	1,017.98	1,018.90	1,022.23	1,018.31	1,019.36	1,015.60	1,014.02	1,020.52	1,019.44	1,020.23	1,019.36
17	1,018.48	1,016.56	1,019.48	1,022.90	1,019.06	1,018.81	1,009.02	1,014.31	1,019.94	1,019.36	1,020.02	1,019.31
18	1,017.98	1,019.06	1,019.23	1,021.81	1,019.52	1,018.02	1,010.40	1,011.44	1,019.52	1,019.23	1,019.69	1,019.27
19	1,019.27	1,017.15	1,019.10	1,021.90	1,019.27	1,015.10	1,011.06	1,011.90	1,019.98	1,019.65	1,019.60	1,019.27
20	1,019.65	1,017.94	1,019.02	1,020.90	1,018.69	1,014.65	1,013.40	1,012.73	1,019.94	1,020.40	1,019.52	1,020.19
21	1,020.27	1,018.48	1,018.73	1,020.19	1,020.19	1,013.19	1,016.65	1,013.06	1,019.81	1,020.15	1,019.52	1,020.27
22	1,019.81	1,018.56	1,018.56	1,020.65	1,020.65	1,018.48	1,019.19	1,013.77	1,019.73	1,019.65	1,019.52	1,019.90
23	1,018.90	1,018.02	1,018.56	1,023.40	1,019.56	1,019.52	1,019.10	1,012.10	1,019.40	1,019.56	1,019.48	1,019.69
24	1,019.02	1,018.77	1,018.56	1,021.31	1,019.10	1,015.40	1,014.94	1,014.19	1,019.81	1,020.06	1,019.56	1,019.48
25	1,018.77	1,019.77	1,019.02	1,020.06	1,018.81	1,013.81	1,011.48	1,014.98	1,020.02	1,021.19	1,019.48	1,019.56
26	1,018.94	1,018.73	1,017.81	1,019.69	1,018.69	1,013.77	1,012.06	1,012.44	1,020.60	1,021.23	1,020.36	1,019.15
27	1,018.86	1,018.69	1,017.86	1,020.69	1,018.23	1,013.90	1,012.15	1,013.52	1,020.06	1,020.56	1,019.27	1,019.19
28	1,019.56	1,018.81	1,017.86	1,020.98	1,017.90	1,011.69	1,005.23	1,011.23	1,019.73	1,020.27	1,019.27	1,019.23
29	1,017.94	1,017.98	1,018.23	1,019.98	1,017.90	1,009.02	1,012.65	1,011.19	1,019.65	1,019.98	1,019.15	1,019.23
30	1,017.73	....	1,019.19	1,019.40	1,019.44	1,015.10	1,013.52	1,007.15	1,019.56	1,019.86	1,019.15	1,019.36
31	1,017.60	....	1,019.52	....	1,018.94	....	1,010.98	1,011.15	....	1,019.69	....	1,019.73

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River at Genesee Street Bridge, Utica, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	396.59	395.84	396.84	404.69	399.14	399.34	397.24	395.04	395.14	395.54	395.69	396.29
2.....	396.54	395.84	396.74	404.94	398.94	398.84	396.74	395.04	395.14	395.39	395.64	396.29
3.....	396.39	395.74	396.74	405.19	398.72	399.24	396.34	395.34	395.14	395.29	395.54	396.89
4.....	396.34	395.64	396.74	405.34	398.64	399.44	395.84	395.24	395.14	395.24	395.54	396.99
5.....	396.34	395.64	396.74	405.24	398.59	399.44	395.49	395.24	395.14	395.24	395.49	397.04
6.....	396.24	395.64	396.84	404.84	398.64	399.34	395.44	395.14	395.49	395.24	395.44	397.09
7.....	396.19	395.64	396.94	404.69	398.84	399.34	395.34	395.14	395.59	395.14	395.44	397.14
8.....	396.14	395.54	397.04	404.89	398.84	399.34	395.34	395.14	395.29	395.14	395.84	397.14
9.....	396.14	395.54	397.14	405.19	398.84	398.99	395.34	395.04	395.14	395.14	396.19	397.19
10.....	396.04	395.54	397.14	405.19	398.74	398.59	395.24	395.09	395.14	395.34	396.24	397.39
11.....	396.04	395.54	397.24	404.89	398.69	398.54	395.24	395.14	395.14	395.69	396.24	397.44
12.....	395.99	395.54	397.39	402.69	398.64	398.54	395.14	395.24	395.24	396.04	396.24	397.54
13.....	395.94	395.54	397.49	400.99	398.64	398.44	395.14	395.24	395.24	395.94	396.14	397.59
14.....	395.89	395.54	397.59	399.24	398.59	398.44	395.29	395.24	395.24	395.69	396.24	397.64
15.....	395.84	395.59	397.94	399.04	398.54	398.34	395.29	395.24	395.24	395.49	396.24	397.74
16.....	395.84	395.64	398.19	398.94	398.44	398.34	395.24	395.24	395.34	395.34	396.34	397.64
17.....	395.84	395.74	398.39	398.94	398.54	398.34	395.24	395.24	395.64	395.34	396.34	397.64
18.....	395.74	395.74	398.44	398.94	398.69	398.34	395.14	395.24	395.64	395.24	396.34	397.74
19.....	396.09	395.74	398.44	399.04	398.69	398.24	395.14	395.24	395.94	395.24	396.34	397.84
20.....	396.14	395.99	398.49	398.99	398.64	398.24	395.14	395.14	396.14	395.24	396.24	397.94
21.....	396.14	396.14	398.79	398.94	398.99	398.14	395.14	395.14	395.99	395.14	396.14	398.14
22.....	396.14	396.44	398.99	398.99	399.69	398.14	395.14	395.14	395.54	395.14	396.14	398.24
23.....	396.29	396.79	399.29	399.19	400.09	398.14	395.14	395.14	395.34	395.14	396.04	398.24
24.....	396.14	396.94	399.49	399.44	399.69	398.09	395.14	395.14	395.94	395.99	395.94	398.14
25.....	396.14	396.99	399.89	399.34	399.24	397.99	395.14	395.14	396.69	396.54	396.14	398.19
26.....	396.04	397.14	400.29	399.29	398.89	397.89	395.04	395.14	397.01	396.44	396.79	398.24
27.....	396.04	397.44	400.49	399.19	398.49	397.84	395.04	395.14	396.89	396.24	397.14	398.29
28.....	395.94	397.39	400.74	399.09	398.44	397.74	395.04	395.14	396.29	396.14	396.99	398.49
29.....	395.94	397.04	401.64	398.99	398.44	397.69	395.04	395.14	395.84	396.09	396.79	398.69
30.....	395.94	......	403.49	399.04	399.24	397.59	395.04	395.14	395.54	395.99	396.59	398.99
31.....	395.89	......	404.29	......	399.54	......	395.04	395.14	......	395.79	......	399.24

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Nine-Mile Creek near Stittville, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	484.37	484.82	484.92	486.92	485.07	484.07	483.82	483.82	483.92	484.07	483.97	484.02
2.....	484.42	484.82	484.92	486.47	485.02	483.97	483.82	483.92	483.97	484.17	484.02	484.07
3.....	484.27	484.82	484.92	486.42	484.92	484.07	483.82	484.07	484.02	485.02	484.02	485.07
4.....	484.22	484.82	484.92	485.57	484.87	484.17	483.82	484.02	484.12	485.17	484.02	485.07
5.....	484.22	484.92	484.92	485.97	484.87	484.27	483.72	483.92	484.12	485.22	484.02	484.37
6.....	484.22	484.92	484.92	487.65	485.07	484.02	483.72	483.82	484.12	484.30	484.02	484.32
7.....	484.22	484.92	484.92	487.87	485.12	484.07	483.82	483.87	484.17	484.27	484.02	484.32
8.....	484.22	484.92	484.92	486.47	484.27	484.07	483.82	483.92	484.12	484.37	483.97	484.27
9.....	484.22	484.92	484.92	486.37	484.27	484.02	483.82	483.92	484.12	484.97	484.02	484.37
10.....	484.22	484.92	484.92	485.57	484.22	484.02	483.82	483.92	484.22	485.17	484.02	484.32
11.....	484.22	484.92	484.97	485.77	484.12	484.02	483.82	483.92	484.12	484.97	484.07	484.32
12.....	484.22	484.92	485.02	486.12	484.17	484.02	483.82	483.92	484.27	484.92	484.17	484.22
13.....	484.22	484.92	485.02	486.22	484.52	483.97	483.82	483.92	484.27	484.92	484.22	484.12
14.....	484.12	484.92	485.12	485.37	484.97	483.92	483.82	483.92	484.22	484.42	486.17	484.12
15.....	484.12	484.92	485.12	485.37	485.07	483.97	483.82	484.02	484.17	484.27	485.07	484.12
16.....	484.12	484.92	485.22	485.47	485.12	484.12	483.82	484.07	484.17	484.02	484.92	484.07
17.....	484.12	484.92	485.22	486.02	485.17	484.17	483.82	484.07	484.22	483.97	484.12	484.02
18.....	484.97	484.92	485.32	485.87	485.07	484.12	483.82	484.12	484.12	483.92	483.97	484.07
19.....	485.22	*a*	485.32	486.02	485.07	484.07	483.82	484.02	484.17	485.17	484.02	484.02
20.....	484.22	*a*	485.37	485.37	485.62	484.07	483.82	484.02	484.27	485.02	484.07	484.02
21.....	484.12	*a*	485.42	485.07	485.62	483.97	483.82	484.02	484.27	484.17	484.07	484.02
22.....	484.92	*a*	485.42	485.02	485.07	483.92	483.92	484.07	484.37	484.07	484.07	484.02
23.....	484.92	*a*	485.42	484.97	484.97	483.92	483.97	484.12	484.32	484.12	484.17	484.02
24.....	484.92	*a*	485.47	485.12	484.27	483.92	483.97	484.12	485.42	486.02	484.22	484.02
25.....	484.92	485.12	485.47	485.07	484.17	483.92	483.92	484.12	485.22	485.17	484.27	484.02
26.....	484.92	485.92	485.52	484.92	484.02	483.82	483.82	484.07	485.02	484.67	484.22	484.07
27.....	484.92	484.97	485.92	484.82	484.02	483.82	483.82	484.12	484.97	484.47	484.07	484.07
28.....	484.92	484.92	486.02	484.97	484.17	483.82	483.82	484.17	484.37	484.27	484.02	484.12
29.....	484.82	484.92	487.67	485.07	484.57	483.82	483.82	484.27	485.12	484.12	484.02	484.12
30.....	484.82	......	487.47	485.07	484.97	483.82	483.82	484.32	485.17	484.12	484.02	484.22
31.....	484.82	......	487.37	......	484.62	......	483.82	484.32	......	484.02	......	485.27

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River below State Dam at Rome, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	428.96	429.26	429.16	429.16	429.96	429.46	427.86	427.66	427.76	427.66	427.68	428.06
2.....	428.96	429.26	429.16	429.16	430.46	429.46	427.86	427.66	427.76	427.66	427.66	428.26
3.....	428.86	429.26	429.16	429.46	430.26	429.46	427.86	427.66	427.76	427.66	427.66	428.26
4.....	428.66	429.06	429.16	429.46	429.86	429.56	427.86	427.96	427.76	427.66	427.66	428.06
5.....	428.66	429.06	429.16	429.56	429.66	429.46	427.86	427.96	427.76	427.66	427.66	428.96
6.....	428.66	429.06	429.06	430.06	429.46	429.56	427.86	427.86	427.76	427.66	427.66	428.96
7.....	428.66	429.06	429.06	429.96	428.36	429.56	427.86	427.86	427.76	427.66	427.66	428.86
8.....	428.66	429.06	429.26	429.96	428.46	429.56	427.86	427.76	427.66	427.66	427.66	428.76
9.....	428.66	429.06	429.26	430.16	428.46	429.16	427.86	427.76	427.66	427.66	427.66	428.76
10.....	428.56	429.06	429.16	430.16	428.46	429.36	427.86	427.76	427.66	427.66	427.66	428.06
11.....	428.56	428.96	429.26	430.26	428.06	429.46	427.86	427.86	427.66	427.66	427.66	428.66
12.....	428.56	428.96	429.26	431.26	428.26	429.46	427.86	427.76	427.66	427.66	427.66	428.46
13.....	428.56	428.96	429.26	430.26	428.26	429.46	427.86	427.76	427.66	427.66	427.66	428.26
14.....	428.46	428.96	429.26	430.06	428.46	429.46	427.86	427.76	427.66	427.66	427.66	428.96
15.....	428.46	428.96	429.26	430.06	428.46	429.46	427.86	427.76	427.66	427.66	427.66	428.96
16.....	428.46	428.96	429.26	430.16	428.26	429.46	427.86	427.76	427.66	427.66	427.66	428.96
17.....	428.46	428.96	429.26	429.96	428.76	429.56	427.86	427.76	427.66	427.66	427.66	428.96
18.....	428.46	428.86	429.46	430.16	429.06	429.56	427.86	427.76	427.66	427.66	427.66	428.96
19.....	428.56	429.06	429.56	430.26	429.06	428.96	427.86	427.76	427.66	427.66	427.66	428.96
20.....	428.56	429.06	429.46	430.26	429.06	427.86	427.86	427.76	427.66	427.66	427.66	428.96
21.....	428.86	429.06	429.46	430.26	429.46	427.86	427.86	427.76	427.66	427.66	428.06	428.86
22.....	429.26	429.06	429.46	430.46	429.46	427.86	427.86	427.76	427.66	427.66	427.66	428.86
23.....	429.26	429.06	429.46	430.46	429.26	427.86	427.86	427.76	427.66	427.66	427.66	428.86
24.....	429.26	429.06	429.46	430.46	428.71	427.86	427.86	427.76	427.66	428.06	427.66	428.86
25.....	429.26	429.26	429.46	430.26	428.41	427.86	427.86	427.76	427.66	427.66	427.66	428.66
26.....	429.26	429.26	429.26	430.26	428.46	427.86	427.86	427.76	428.26	427.66	427.66	428.46
27.....	429.16	429.26	429.26	430.46	428.46	427.86	427.86	427.76	427.86	427.66	427.66	428.26
28.....	429.26	429.26	429.26	430.26	428.46	428.26	427.86	427.76	427.86	427.66	427.66	427.96
29.....	429.26	429.16	429.46	430.06	428.46	428.26	427.86	427.76	427.66	427.66	427.66	427.96
30.....	429.26	......	429.26	429.96	428.46	428.06	427.66	427.76	427.66	427.66	427.66	427.96
31.....	429.26	......	429.16	......	428.46	......	427.66	427.76	......	427.66	......	428.96

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River above Dam at Rome, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	431.83	431.73	431.43	432.03	432.53	432.43	430.73	430.23	430.23	430.53	430.33	430.63
2.....	431.83	431.73	431.43	432.13	432.93	432.43	430.73	430.13	430.23	430.53	430.33	430.73
3.....	431.83	431.73	431.43	432.33	432.93	432.43	430.73	430.13	430.23	430.53	430.23	431.53
4.....	431.73	431.73	431.43	432.33	432.23	432.53	429.93	430.53	430.23	430.33	430.23	430.53
5.....	431.73	431.73	431.43	432.33	432.13	432.33	430.23	430.33	430.23	430.33	430.43	431.73
6.....	431.73	431.53	431.43	432.93	431.93	432.43	430.23	430.23	430.23	430.23	430.43	431.73
7.....	431.73	431.53	431.43	432.53	431.53	432.43	430.13	430.23	430.23	430.23	430.43	431.73
8.....	431.73	431.53	431.53	432.53	431.53	432.43	430.13	430.23	430.23	430.23	430.43	431.73
9.....	431.73	431.53	431.53	432.83	431.53	432.13	430.13	430.23	430.23	430.23	430.43	431.73
10.....	431.73	431.53	431.53	432.83	431.53	432.33	430.13	430.23	430.13	430.23	430.43	431.73
11.....	431.73	431.53	431.73	432.73	431.13	432.33	430.13	430.23	430.13	430.23	430.43	431.73
12.....	431.73	431.53	431.73	432.73	431.33	432.33	430.23	430.23	430.13	430.23	430.43	431.53
13.....	431.73	431.53	431.73	432.73	431.33	432.33	430.23	430.23	430.23	430.23	430.43	431.53
14.....	431.53	431.53	431.73	432.53	431.53	432.33	430.23	430.23	430.23	430.23	430.33	432.33
15.....	431.53	431.53	431.73	432.73	431.53	432.33	430.13	430.23	430.23	430.23	430.53	432.13
16.....	431.53	431.53	431.73	432.73	431.33	432.33	430.23	430.23	430.23	430.23	430.73	432.13
17.....	431.53	431.53	431.73	432.53	431.73	432.43	430.23	430.23	430.23	430.23	430.73	432.23
18.....	431.53	431.33	431.93	432.73	431.93	432.43	430.23	430.23	430.23	430.13	430.73	432.23
19.....	431.53	431.33	432.13	432.73	432.13	431.93	430.13	430.23	430.23	430.13	430.73	432.33
20.....	431.53	431.33	431.93	432.73	432.13	429.73	430.13	430.23	430.23	430.23	430.73	432.33
21.....	431.63	431.33	431.93	432.73	432.33	429.73	430.13	430.23	430.23	430.23	431.53	432.23
22.....	431.73	431.33	431.93	432.93	432.33	429.73	430.13	430.13	430.23	430.23	430.73	432.23
23.....	431.73	431.33	431.93	432.93	432.13	429.73	430.13	430.13	430.23	430.23	430.73	432.23
24.....	431.73	431.33	431.93	432.93	431.33	429.73	430.13	430.13	430.33	431.53	430.73	432.23
25.....	431.73	431.53	431.93	432.73	431.01	429.73	430.13	430.23	430.33	430.53	430.73	432.23
26.....	431.73	431.53	431.93	432.73	431.08	429.73	430.13	430.23	431.43	430.53	430.73	432.13
27.....	431.73	431.53	431.93	432.93	431.08	429.73	430.13	430.23	431.23	430.53	430.53	432.13
28.....	431.73	431.53	431.73	432.73	431.08	431.23	430.23	430.23	431.23	430.53	430.53	432.13
29.....	431.73	431.43	431.93	432.53	431.08	431.23	430.33	430.23	430.73	430.33	430.73	431.93
30.....	431.73	......	431.93	432.53	431.08	431.13	430.23	430.23	430.50	430.33	430.73	431.93
31.....	431.73	......	431.93	......	431.13	......	430.23	430.23	......	430.43	......	432.73

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River at Floyd Ave. Bridge, Rome, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	447.06	446.76	447.16	447.41	448.71	446.53	446.51	446.56	446.51	446.61	446.49	446.51
2.....	446.91	446.71	447.09	447.53	448.91	448.11	446.51	446.56	446.53	446.53	446.51	446.51
3.....	446.83	446.71	447.01	448.46	448.71	448.11	446.51	446.53	446.51	446.51	446.51	446.51
4.....	446.73	446.71	447.01	448.43	448.11	447.81	446.51	446.76	446.51	446.51	446.49	446.51
5.....	446.71	446.81	447.06	448.33	448.11	447.19	446.51	446.53	446.53	446.51	446.51	446.61
6.....	446.71	446.76	447.01	448.56	447.93	448.06	446.51	446.53	446.53	446.41	446.46	447.49
7.....	446.71	446.76	446.99	448.43	446.51	448.11	446.56	446.56	446.53	446.46	446.51	447.41
8.....	446.71	446.73	446.99	448.51	446.51	448.03	446.56	446.59	446.53	446.49	446.49	447.31
9.....	446.89	446.71	447.01	448.43	446.51	448.09	446.51	446.59	446.53	446.43	446.46	447.41
10.....	446.91	446.71	447.01	448.41	446.59	448.03	446.56	446.63	446.56	446.49	446.46	447.41
11.....	447.01	446.76	447.01	448.41	446.83	448.01	446.53	446.51	446.53	446.51	446.46	447.41
12.....	446.91	446.73	447.01	448.31	446.91	447.91	446.56	446.51	446.51	446.51	446.51	447.46
13.....	446.81	446.71	446.96	448.33	446.91	448.13	446.56	446.51	446.51	446.51	446.46	447.41
14.....	446.76	446.71	446.93	448.36	446.91	448.73	446.59	446.59	446.53	446.51	446.49	447.41
15.....	446.81	446.73	446.99	448.51	446.91	448.71	446.53	446.81	446.71	446.46	446.51	448.01
16.....	446.79	446.76	447.71	448.51	447.23	448.61	446.53	446.79	446.63	446.46	446.51	448.01
17.....	446.79	446.73	447.81	448.43	447.51	448.36	446.61	446.69	446.63	446.41	446.51	447.91
18.....	446.93	446.71	448.19	448.41	447.46	447.31	446.61	446.59	446.61	446.46	446.49	447.93
19.....	446.96	446.76	448.21	448.41	447.11	446.31	446.61	446.51	446.61	446.56	446.49	447.96
20.....	447.09	447.09	447.93	448.41	447.11	446.31	446.61	446.51	446.56	446.51	446.51	447.96
21.....	447.09	447.21	448.09	448.41	447.51	446.31	446.61	446.53	446.61	446.46	446.51	447.96
22.....	446.96	447.23	448.11	448.43	446.71	446.31	446.61	446.53	446.66	446.41	446.49	446.96
23.....	446.91	447.29	448.11	448.53	446.41	446.39	446.53	446.51	446.63	446.41	446.49	446.96
24.....	446.89	447.39	447.46	448.41	447.23	446.41	446.56	446.51	446.66	446.43	446.51	447.01
25.....	446.81	447.36	447.06	448.41	448.11	446.41	446.56	446.51	446.61	446.56	446.51	447.01
26.....	446.79	447.31	446.99	448.41	447.41	446.41	446.63	446.53	446.56	446.51	446.49	446.96
27.....	446.79	447.41	446.91	448.41	447.83	446.41	446.69	446.53	446.53	446.51	446.46	446.99
28.....	446.71	447.31	446.91	448.36	448.09	446.41	446.61	446.56	446.51	446.46	446.51	447.01
29.....	446.76	447.26	447.56	448.36	447.86	446.51	446.56	446.51	446.53	446.49	446.51	447.11
30.....	446.81	......	447.91	448.36	447.36	446.51	446.61	446.51	446.59	446.49	446.53	447.21
31.....	446.81	......	447.26	......	446.91	......	446.59	446.51	......	446.51	......	447.46

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Mohawk River below Dam at Ridge Mills, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	459.70	459.60	461.20	459.80	461.20	460.50	459.30	459.20	459.10	459.00	459.00	459.10
2.....	459.40	459.60	461.20	459.90	461.20	459.70	459.20	459.20	459.10	459.00	459.00	459.10
3.....	459.40	459.60	461.20	460.80	461.20	460.50	459.20	459.50	459.10	459.00	459.00	459.20
4.....	459.60	459.70	461.20	460.70	460.70	460.70	459.20	459.50	459.10	459.00	459.00	459.20
5.....	459.20	459.90	461.20	460.80	460.70	460.60	459.20	459.20	459.10	458.90	459.00	459.20
6.....	459.60	459.70	460.90	460.80	460.70	460.50	459.20	459.20	459.30	458.90	459.00	460.00
7.....	459.90	459.60	460.90	461.00	459.10	460.50	459.20	459.20	459.20	458.90	459.00	460.00
8.....	460.10	459.60	460.80	460.80	459.10	460.50	459.20	459.20	459.20	459.00	459.20	460.00
9.....	460.10	459.80	460.20	460.80	458.70	460.50	459.20	459.20	459.20	459.10	459.20	460.00
10.....	460.20	459.80	460.40	460.80	458.70	460.50	459.20	459.20	459.20	459.10	459.10	460.00
11.....	460.30	460.00	460.40	460.80	459.00	460.50	459.20	459.00	459.20	459.10	459.00	460.00
12.....	460.20	461.20	459.80	460.80	459.50	460.50	459.20	459.00	459.20	459.00	459.00	460.00
13.....	460.70	461.20	459.60	460.70	459.50	460.50	459.20	459.00	459.20	459.00	459.00	460.00
14.....	460.70	461.20	459.20	460.80	459.50	461.00	459.20	459.00	459.20	459.00	459.30	460.00
15.....	460.80	460.20	459.20	460.90	459.50	461.00	459.20	459.00	459.20	459.00	459.20	460.50
16.....	460.90	460.20	459.80	460.80	459.50	461.00	459.20	459.00	459.30	459.00	459.20	460.50
17.....	459.80	460.00	460.00	460.80	460.00	460.80	459.20	459.00	459.20	459.00	459.20	460.50
18.....	460.00	460.00	459.80	460.90	460.00	459.40	459.20	459.20	459.20	459.00	459.20	460.50
19.....	460.90	459.90	459.90	460.80	459.90	459.40	459.20	459.10	459.30	459.00	459.10	460.60
20.....	460.50	460.50	459.90	460.80	460.00	458.80	459.20	459.10	459.20	459.00	459.10	460.50
21.....	460.20	460.00	460.70	460.80	460.60	458.80	459.20	459.10	459.20	459.00	459.10	460.50
22.....	460.10	459.90	460.60	460.80	460.50	459.50	459.20	459.20	459.20	459.00	459.10	460.50
23.....	459.60	460.80	460.50	460.80	460.40	459.50	459.20	459.20	459.30	459.00	459.10	460.40
24.....	459.50	460.80	459.90	460.80	460.40	458.90	459.20	459.10	459.40	459.00	459.10	460.40
25.....	459.40	460.90	459.60	460.80	459.60	459.00	459.20	459.10	459.40	459.10	459.20	460.40
26.....	459.70	460.90	459.40	460.80	459.60	458.90	459.20	459.10	459.30	459.10	459.10	459.70
27.....	459.90	460.90	459.40	460.80	459.80	458.90	459.20	459.10	459.30	459.10	459.10	459.70
28.....	459.50	461.10	459.40	460.80	459.80	459.70	459.20	459.10	459.00	459.10	459.10	459.20
29.....	459.50	461.20	459.90	460.80	459.80	459.70	459.20	459.10	459.00	459.00	459.10	459.20
30.....	459.70	......	460.50	460.80	458.60	459.30	459.20	459.10	459.00	459.00	459.10	459.20
31.....	459.60	......	459.80	......	460.60	......	459.20	459.10	......	459.00	......	460.50

Mean Daily Discharge, Second-feet, of East Canada Creek at Dolgeville, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.
1912.											
1	582	227	192	3,361	1,180	441	100	100	*88	305	486
2	384	227	209	2,588	1,144	*338	113	85	112	423	317
3	348	218	*159	2,385	903	491	125	92	183	349	*547
4	191	*247	218	1,705	742	406	121	*110	252	379	461
5	190	186	211	1,825	*1,044	382	95	85	172	385	404
6	170	239	194	4,037	1,542	359	89	105	230	*283	420
7	*519	255	190	*5,007	1,276	350	*81	95	212	244	453
8	114	247	199	4,488	496	226	85	95	*144	243	......
9	209	244	213	3,151	495	*257	105	95	117	243	......
10	227	234	*223	2,528	486	245	95	100	121	243	......
11	220	*271	200	1,842	424	226	85	*175	117	304	......
12	252	210	195	1,460	*300	223	85	123	141	380	......
13	193	200	394	1,236	395	214	95	105	130	*176	......
14	*205	189	342	*2,470	398	210	*95	100	105	260	......
15	230	168	468	3,713	389	180	124	105	*126	282	......
16	226	196	909	4,860	406	*195	126	100	204	243	......
17	222	163	*1,353	5,225	992	179	113	100	227	298	......
18	200	*125	772	4,504	1,086	199	101	*93	191	243	......
19	226	160	393	4,256	*976	183	95	100	479	447	......
20	345	243	404	2,918	1,097	253	94	85	399	*828	......
21	*401	243	557	*2,608	1,340	261	*100	134	346	765	......
22	376	243	758	4,987	1,419	138	129	126	*261	546	......
23	346	227	753	4,518	1,619	*138	107	105	249	595	......
24	344	301	*550	3,470	1,235	127	102	256	329	689	......
25	339	*237	632	2,038	971	128	127	*115	994	1,926	......
26	284	204	862	1,950	*503	130	95	95	1,017	1,648	......
27	359	241	1,078	2,395	550	142	105	115	668	*1,364	......
28	*229	227	687	*2,149	505	155	*106	99	401	960	......
29	227	209	745	1,659	919	137	75	105	*219	603	......
30	227	......	1,039	1,663	432	*149	95	85	262	454	......
31	227	......	*634	......	566	......	95	85	......	369	......
Mean	278	220	508	2,935	833	235	102	109	273	532	......

* Sunday.

Monthly Discharge of East Canada Creek at Dolgeville, N. Y.
[Drainage area, 256 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1912.					
January	582	114	278	1.09	1.26
February	301	125	220	0.859	0.926
March	1,353	159	508	1.98	2.28
April	5,225	1,236	2,935	11.50	12.80
May	1,619	300	833	3.25	3.75
June	491	127	235	0.918	1.02
July	129	75	102	0.398	0.459
August	256	85	109	0.426	0.491
September	1,017	88	273	1.07	1.19
October	926	176	532	2.08	2.40
November *a*	....	....	....	....	....
December *a*	....	....	....	....	....

a Records incomplete.

WEST CANADA CREEK DRAINAGE BASIN.

DESCRIPTION OF BASIN.

West Canada creek rises in West Canada lakes, in southwest-central Hamilton county, and flows southwestward, then southeastward into the Mohawk at Herkimer, N. Y.

The drainage area is shown on the Utica, Little Falls, Remsen, Wilmurt, Old Forge and Canada lakes quadrangles, U. S. Geological Survey topographic map.

There are about fifty small lakes and a few undrained ponds in the watershed of the stream. Most of these are situated near the head water and above the gaging station, the largest single water-surface being Honnedaga lake, 1.4 square miles in extent. There is also a small amount of controllable storage, in reservoirs formed by three dams. Swamps and marshes are numerous in the region of the head waters, usually adjoining lakes and tributaries and having an extent of one-half square mile or less each.

Much of the region above Twin Rock is timber-covered. There are extensive sand areas in the central and upper drainage basins. The soil of the upper watershed is underlaid by granite gneiss usually at or near the surface, excepting in alluvial valleys. From a point just above Twin Rock bridge and extending downstream beyond Trenton Falls, the underlying geological formation is Trenton limestone.

Compacted snow accumulates in the woodlands in winter, often to a depth of three or four feet, and representing an inch of water for each five or six inches of snow. This melts slowly, feeding the stream in March and April, which months may show a run-off greatly exceeding the precipitation.

Drainage Area of West Canada Creek.*

DIVISIONS OF AREA.	AREA IN SQUARE MILES.		
	Place to place.	Sub-total.	Total.
West Canada creek lakes, source to outlet of Mud lake	18.05	......	18.05
West Canada creek, foot of lakes to Swanson dam	28.77	......	46.80
West Canada creek, Swanson dam to ¼ mile below Metcalf brook	46.82	......	93.00
Honnedaga lake, above outlet	5.40	5.40	....
Honnedaga brook, foot of lake to mouth	11.90	17.80	....
Honnedaga lake and brook, total, source to mouth	......	17.80	110.94
West Canada creek, Honnedaga lake outlet to junction with south branch (Nobleboro)	80.46	......	141.40
South branch, West Canada creek, above Mountain House (Remonda)	34.40	34.40	....
South branch, West Canada creek, Mountain House to mouth at Nobleboro	19.25	53.65	....
South branch, West Canada creek, total, source to mouth	......	53.65	....
West Canada creek, total to Nobleboro, including south branch	......	......	195.00
West Canada creek, Nobleboro (junction N. and S. branches) to Wilmurt	2.58	......	....
West Canada creek, total above bridge at Wilmurt	......	......	197.63
Four-mile brook, total, source to mouth	......	26.17	....
West Canada creek, total at Wilmurt, including Four-mile brook	......	......	223.80
West Canada creek, Wilmurt to mouth of Black creek	36.92	......	....
West Canada creek, total to mouth of Black creek	......	......	260.72
Black creek, source through Hall Vly	8.40	8.40	....
Black creek, Hall Vly to Bennett's mill (first bridge above Gray)	16.30	24.70	....
Black creek, Bennett's mill to Gray	4.50	29.20	....
Black creek, Gray to first bridge below Gray	3.00	32.20	....
Mill creek source through Cranberry lake and swamp	11.00	......	....
Mill creek, foot of Cranberry lake to junction N. Branch	6.20	17.20	....
Mill creek, total, source to mouth	......	17.20	....
North branch, Black creek, above contour 1,520 (Bull Hill road)	6.80	......	....
North branch, Black creek, Bull Hill road to junction, Mill creek	4.00	10.80	....
North branch, Black creek, junction, Mill creek, to mouth	0.85	11.65	....
North branch, Black creek, total to junction with Black creek	......	20.85	....
Black creek, total to first bridge below Gray	......	61.05	....
Black creek, first bridge below Gray to Mounts creek	0.17	61.22	....
Mounts creek, above Gray-Wilmurt road (Radley)	13.25	......	....
Mounts creek, Radley to mouth	2.10	......	....
Mounts creek, total, source to mouth	......	15.35	....
Black creek, mouth of Mounts creek to second bridge below Gray	1.55	......	....
Black creek, total to second bridge below Gray	......	78.12	....
Black creek, second bridge below Gray to third bridge	5.65	83.77	....
Black creek, third bridge below Gray to fourth bridge	12.35	93.12	....
Black creek, fourth bridge below Gray to fifth bridge (Pardeville)	4.00	100.12	....
Black creek, Pardeville to Grant	1.95	102.07	....
Black creek, Grant to mouth	1.15	103.22	....
Black creek, total, source to mouth	......	103.22	....
West Canada creek, total to mouth of and including Black creek	......	......	363.94
West Canada creek, mouth of Black creek to Twin Rock bridge	0.50	......	....
West Canada creek, total to Twin Rock bridge	......	......	364.44
West Canada creek, Twin Rock bridge to Hinckley dam	8.50	......	372.94
West Canada creek, Hinckley dam to Prospect	2.00	......	374.94
West Canada creek, Prospect to Trenton Falls	0.90	......	375.84
West Canada creek, Trenton Falls to Steuben creek	6.20	......	382.04
Steuben creek, total, source to mouth	52.30	......	434.34
West Canada creek, Steuben creek to Poland (first bridge below)	35.80	......	470.14
West Canada creek, Poland to Newport	10.00	......	480.14
West Canada creek, Newport to Middleville	47.20	......	527.34
West Canada creek, Middleville to Kast bridge	47.50	......	574.84
West Canada creek, Kast bridge to mouth	8.80	......	583.64
West Canada creek, total, source to mouth	......	......	583.64

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* Taken from U. S. Geological Survey topographic maps.

WEST CANADA CREEK AT KAST BRIDGE, NEAR HERKIMER, N. Y.

This gaging station, which is located on West Canada creek about four miles from its junction with the Mohawk river, was established May 15, 1905, by Robert E. Horton, hydrographer, U. S. Geological Survey. The station has since been maintained by this Department.

The gage is of the weight-and-reel type and is placed in a box secured to the north railing of bridge at first panel point from east abutment. The readings are taken by measuring down from a scale in the box to the water-surface by means of an iron weight suspended by graduated tape, which is attached to the reel. The scale in box is one foot long, graduated to tenths and hundredths, with its zero at elevation 464.04. The end of weight used to locate the water-surface is 49.80 feet from zero of tape, which is graduated to feet. The elevation of bottom of weight, when zero of tape is opposite zero of scale, is, therefore, 414.24. The elevation of bench-mark on north end of bridge-seat of right-hand abutment is 458.02.

Observations are taken twice daily by Lloyd Kast.

Discharge measurements are made from the downstream side of the bridge, to which the gage tape is attached. The initial point for soundings is the top face of the left abutment, downstream side. The drainage area at this point is 574 square miles, or 58 per cent greater than at Twin Rock bridge.

Current-meter Discharge Measurement of West Canada Creek at Kast Bridge, near Herkimer, N. Y.

DATE.	Hydrographer.	GAGE READING.			Meter No.	Lateral interval.	Submergence depth.	Total area.	Total width.	Computed discharge.
		Beginning.	Ending.	Mean.						
1912. May 7	Barrett & Fogarty.....	30.70	30.96	30.82	360	*Feet.* 10	0.6	*Sq. ft.* 914	*Feet.* 195	*Sec.-ft.* 3,848

Mean Daily Discharge, Second-feet, of West Canada Creek at Kast Bridge, near Herkimer, N. Y

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	1,274	1,324	1,385	6,280	2,970	1,735	194	295	*200	1,120	916	*694
2	1,140	1,274	1,490	5,864	2,602	*1,630	248	271	243	1,910	1,350	811
3	1,070	1,274	*1,299	3,560	2,602	1,490	257	351	248	1,197	*1,420	7,021
4	789	*1,420	1,350	2,740	2,372	1,248	280	*409	267	1,095	1,095	5,340
5	577	1,420	1,222	3,746	*2,234	1,070	299	442	636	1,095	1,018	3,206
6	475	1,197	1,197	7,276	2,418	1,018	257	304	584	*826	942	3,932
7	*526	1,805	1,172	*11,706	3,147	826	*234	295	752	716	1,665	3,560
8	680	1,385	1,140	10,412	2,694	752	188	309	*518	621	9,876	*2,878
9	665	1,630	1,420	7,343	2,326	*708	234	243	423	533	7,410	1,525
10	548	1,350	*1,324	5,400	1,770	562	295	276	314	570	*4,180	1,350
11	672	*1,525	1,350	4,242	1,299	548	200	*295	248	643	2,464	1,350
12	694	1,735	1,248	3,147	*1,197	562	182	446	333	811	1,875	1,095
13	665	1,420	1,385	4,056	1,350	504	215	418	342	*1,044	1,630	621
14	*651	1,420	......	*5,400	1,700	461	*280	342	314	1,140	2,418	847
15	797	1,197	......	7,476	1,299	428	599	285	*342	916	2,556	*811
16	737	993	5,574	11,048	1,420	*437	518	323	1,455	752	2,234	891
17	745	1,490	*5,340	12,028	2,464	489	257	370	1,630	628	*1,700	797
18	866	*1,274	2,878	9,950	3,206	482	271	*399	833	621	1,490	826
19	1,350	1,120	3,870	10,025	*2,832	394	243	215	1,420	891	1,095	3,622
20	1,595	1,875	4,614	7,476	1,770	351	257	248	1,299	*2,050	1,197	3,088
21	*1,665	2,510	2,740	*5,574	5,280	356	*390	271	1,172	1,770	1,095	2,464
22	2,096	2,234	1,805	6,220	6,280	276	442	351	*833	1,070	993	*1,805
23	1,350	1,700	1,770	12,594	4,366	*418	651	323	782	993	916	1,350
24	1,350	1,875	*1,490	8,928	2,602	399	409	333	1,420	2,326	*942	1,095
25	1,299	*1,875	1,274	5,516	2,050	347	319	*342	2,464	4,366	1,120	1,070
26	1,070	1,770	1,222	4,428	*1,945	333	243	257	2,970	4,490	1,140	866
27	1,095	1,875	1,018	5,100	1,490	356	262	328	1,840	*3,029	942	811
28	*1,350	1,735	1,248	*5,690	1,044	323	*285	356	1,248	1,980	847	767
29	1,140	1,560	4,860	4,800	1,018	285	208	295	*891	1,630	701	*730
30	1,140	......	4,920	3,870	2,602	*267	230	262	942	1,248	730	891
31	1,018	......	*5,040	......	2,648	......	333	437	......	1,140	......	1,945
Mean	1,003	1,561	2,298	6,730	2,419	635	299	326	899	1,394	1,932	1,873

* Sunday.

Monthly Discharge of West Canada Creek at Kast Bridge, near Herkimer, N. Y.
[Drainage area, 575 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1912.					
January	2,096	475	1,003	1.74	2.01
February	2,510	993	1,561	2.71	2.92
March	5,574	1,018	2,298	3.99	4.60
April	12,594	2,740	6,730	11.70	13.05
May	6,280	1,018	2,419	4.21	4.85
June	1,735	267	635	1.10	1.23
July	651	182	299	0.52	0.60
August	446	215	326	0.567	0.654
September	2,970	200	899	1.56	1.74
October	4,490	533	1,394	2.42	2.79
November	9,876	701	1,932	3.36	3.75
December	7,021	621	1,873	3.26	3.76

WEST CANADA CREEK AT POLAND, N. Y.

A gaging station was established by this Department on West Canada creek at the first highway bridge below the village of Poland, July 3, 1908. The gage is of the weight-and-chain variety, contained in a box of standard form, which is fastened to the hand railing of the downstream side of the bridge near the left-hand end. Length of chain from end of weight to copper rivet marker is 22.65 feet. The gage is read each morning and night by Harrison Fisher. Current-meter measurements obtained during 1908–1910 established a consistent rating curve for low stages of the stream. The accompanying discharge tables have been deduced by the use of this curve.

Mean Daily Gage Height, in Feet, of West Canada Creek at Poland, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	4.65	4.45	4.65	7.00	5.95	5.15	3.45	3.35	3.30	4.55	4.35	3.70
2	4.50	4.55	4.55	6.95	5.75	4.90	3.30	3.35	3.70	5.60	5.15	4.30
3	4.35	4.45	4.45	6.45	5.65	4.90	3.30	3.50	4.30	4.90	4.95	8.50
4	4.30	4.45	4.50	5.80	5.35	4.75	3.40	3.60	3.90	4.70	4.70	7.20
5	4.05	4.45	4.40	6.05	5.05	4.45	3.30	3.65	4.00	4.65	4.50	6.15
6	3.90	4.25	4.35	7.15	5.75	4.45	3.25	3.55	4.10	4.35	4.35	6.00
7	3.70	4.10	4.40	9.05	5.95	4.20	3.15	3.40	3.70	4.20	5.20	6.10
8	4.35	4.25	4.45	9.40	5.65	4.15	3.45	3.30	3.65	4.05	9.70	5.90
9	4.35	4.40	4.25	8.10	5.55	3.95	3.30	3.35	3.65	4.00	8.15	4.95
10	4.70	4.25	3.90	6.80	5.15	3.90	3.25	3.30	3.40	3.95	6.50	4.80
11	4.70	4.15	4.35	6.40	4.80	3.85	3.25	3.25	3.40	4.10	5.80	4.75
12	4.65	4.45	4.10	5.90	4.65	3.80	3.25	3.70	3.55	4.30	5.25	4.40
13	4.65	4.45	3.90	6.05	4.85	3.85	3.45	3.60	3.55	4.75	5.00	4.00
14	4.80	4.45	3.75	7.45	4.95	3.80	3.65	3.40	3.35	4.65	5.55	4.30
15	5.10	4.45	3.80	8.25	4.85	3.70	3.95	3.40	3.35	4.35	5.65	4.30
16	5.00	4.50	5.25	9.80	4.90	3.75	3.65	3.55	5.10	4.20	5.45	4.25
17	5.05	4.45	5.45	10,45	5.40	3.80	3.40	3.35	4.95	4.00	5.05	4.20
18	5.00	4.40	5.75	9.30	6.10	3.75	3.30	3.40	4.25	4.00	4.85	5.50
19	5.00	4.45	5.65	9.35	5.95	3.65	3.35	3.40	4.90	4.75	4.55	5.90
20	5.10	4.35	5.95	8.20	5.60	3.45	3.35	3.45	4.90	5.10	4.50	5.60
21	5.15	4.60	5.55	7.10	7.40	3.60	3.45	3.40	4.60	5.25	4.45	5.15
22	5.10	4.75	5.25	7.70	7.65	3.35	3.90	3.50	4.25	4.55	4.45	5.15
23	4.95	4.80	5.00	11.00	6.40	3.70	3.85	3.50	4.25	4.40	4.45	4.90
24	4.95	4.95	4.85	8.85	5.70	3.65	3.70	3.45	4.85	5.35	4.35	4.55
25	4.85	4.80	4.55	7.35	5.35	3.55	3.40	3.50	5.30	6.85	4.50	4.45
26	4.80	4.70	4.50	6.55	5.20	3.55	3.35	3.60	6.00	6.65	4.45	4.45
27	4.65	4.75	4.45	7.45	4.80	3.50	3.30	3.45	5.10	5.90	4.30	4.25
28	4.65	4.75	4.55	8.10	4.40	3.55	3.15	3.60	4.60	5.60	4.15	4.20
29	4.60	4.80	5.85	7.05	4.45	3.35	3.45	3.40	4.40	5.05	3.95	4.20
30	4.55	......	6.45	6.30	6.30	3.20	3.30	3.30	4.45	4.75	4.00	4.30
31	4.55	......	6.50	......	5.70	......	3.35	3.25	......	4.50	......	5.52

Current-meter Discharge Measurement of West Canada Creek at Poland, N. Y.

DATE.	Hydrographer.	GAGE READING.			Meter No.	Lateral interval.	Submergence depth.	Total area.	Total width.	Computed discharge.
		Beginning.	Ending.	Mean.						
						Feet.		Sq. ft.	Feet.	Sec.-ft.
1912. May 7	Barrett & Fogarty....	6.53	6.49	6.51	360	10	0.6	946	169	3,627

Mean Daily Discharge, Second-feet, of West Canada Creek at Poland, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	1,073	916	1,073	4,400	2,662	1,552	332	286	*263	991	848	*455
2	950	991	991	4,312	2,350	*1,296	263	286	455	2,134	1,552	814
3	848	916	*916	3,490	2,206	1,296	263	355	814	1,296	*1,343	7,450
4	640	*916	950	2,428	1,790	1,155	309	*405	564	1,114	1,114	4,775
5	462	916	882	2,822	*1,444	916	263	430	620	1,073	950	2,986
6	380	780	848	4,675	2,350	916	240	380	684	*848	848	2,740
7	*455	684	882	*8,738	2,662	748	*200	309	455	748	1,606	2,904
8	554	780	916	9,535	2,206	712	332	263	*430	652	10,225	*2,584
9	532	882	780	6,625	2,062	*592	263	286	430	620	6,728	1,343
10	532	780	*564	4,050	1,552	564	240	263	309	592	*3,575	1,202
11	538	*712	848	3,405	1,202	536	240	*240	309	684	2,428	1,155
12	555	916	684	2,584	*1,073	508	240	455	380	814	1,660	882
13	332	916	564	2,822	1,249	536	332	405	380	*1,155	1,390	620
14	*521	916	480	*5,295	1,343	508	*430	309	286	1,073	2,062	814
15	638	916	508	6,935	1,249	455	592	309	*286	848	2,206	*814
16	590	950	1,660	10,450	1,296	*480	430	380	1,498	748	1,820	780
17	596	916	*1,820	*a*	1,855	508	309	286	1,343	620	*1,444	748
18	693	*882	2,350	9,300	2,904	480	263	*309	780	620	1,249	1,990
19	1,080	916	2,206	9,418	*2,662	430	286	309	1,296	1,155	991	2,584
20	1,276	848	2,662	6,830	2,134	332	286	332	1,296	*1,498	950	2,134
21	*1,332	1,032	2,062	*4,575	5,190	405	*332	309	1,032	1,660	916	1,552
22	1,498	1,155	1,660	5,810	5,705	286	564	355	*780	991	916	*1,552
23	1,080	1,202	1,390	*a*	3,405	*455	536	355	780	882	916	1,296
24	1,080	1,343	*1,249	8,250	2,278	430	455	332	1,249	1,790	*848	991
25	1,039	*1,202	991	5,082	1,790	380	309	*355	1,725	4,138	950	916
26	856	1,114	950	3,650	*1,606	380	286	405	2,740	3,806	916	916
27	876	1,155	916	5,295	1,202	355	263	332	1,498	*2,584	814	780
28	*1,073	1,155	991	*6,625	882	380	*200	405	1,032	2,134	712	748
29	912	1,202	2,506	4,488	916	286	332	309	*882	1,444	592	*748
30	992	......	3,490	3,235	3,235	*220	263	263	916	1,155	620	814
31	814	......	*3,575	......	2,278	......	286	240	......	950	......	1,660
Mean	800	966	1,367	5,540	2,153	603	321	331	850	1,317	1,773	1,669

a Beyond limits of rating curve. * Sunday.

Monthly Discharge of West Canada Creek at Poland, N. Y.
[Drainage area, 470 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1912.					
January	1,498	332	800	1.70	1.96
February	1,343	684	966	2.06	2.22
March	3,575	480	1,367	2.91	3.36
April	*a* 10,450	2,428	5,540	11.79	13.17
May	5,705	882	2,153	4.58	5.28
June	1,552	220	603	1.28	1.43
July	592	200	321	0.683	0.787
August	455	240	331	0.704	0.812
September	2,740	263	850	1.81	2.02
October	4,138	592	1,317	2.80	3.23
November	10,225	592	1,773	3.77	4.21
December	7,450	455	1,669	3.55	4.09

a Actual maximum beyond limits of rating curve.

WEST CANADA CREEK AT TRENTON FALLS, N. Y.

This gaging station, which is located at the dam of the Utica Gas and Electric Co., was established October 17, 1905, by C. A. Poole. The gage board is secured to face of dam in a vertical position and is placed above the water-surface, the readings being taken by means of chain and plumb-bob passing on pulley over top of gage. The observations are taken by placing plumb-bob at water-surface and reading the gage at a point marked on chain ten feet above plumb-bob. The elevation of zero of gage is 1,009.56, to which all readings are added. The gage is graduated in feet and inches and is read twice each day by C. W. Young.

The dam is of concrete with masonry coping and has a spillway 97.9 feet long. Another spillway or by-pass two feet lower than crest or main spillway allows the water to pass through a rock channel on each side of dam. The crest of this lower spillway is 163.4 feet long at an elevation of 1,007.12. The discharge over the two spillways has been calculated by means of the weir formula, using coëfficients derived from the United States Geological Survey experiments.

The discharge diverted by the Power Company has been computed from diagrams expressing the flow as a function of the kilowatts used. These diagrams were made from tests made by the Power Company to determine the discharging capacity of the turbines, which are of a special design. These tests were made by computing the discharge over weirs placed in the tail-race.

A daily record is kept of the total kilowatts used in twenty-four hours, also the number of hours every day each turbine runs, there being four turbines in all.

The mean discharge has been calculated from each observation taken at the gage, thereby giving a mean for twelve hours, and the maximum and minimum discharges given in the accompanying table are, therefore, means for twelve hours and do not represent the highest or lowest flow of short duration.

The pondage above the Trenton Falls dam is very limited and the operation of the generators during low water has to be adjusted according to the condition of inflow. The inflow is controlled by pondage above Hinckley dam. Owing to irregularity of operation during low water, the Trenton Falls record is considered approximate only, for the low-water period.

Owing to the drawing down of the pond above the Trenton Falls dam, the average elevation of the water-surface in the pond is deduced from two daily readings, roughly approximate only. The pond level fluctuates often as much as 10 feet during 24 hours in the low-water season. In connection with the calculated discharge at Trenton Falls it may be stated that there are a variety of conditions which tend to make the results of calculations of discharge for that station somewhat too small, especially during low-water periods.

The drainage area at the point of gaging is 375.8 square miles.

Mean Daily Discharge, Second-feet, of West Canada Creek above Power Dam, Trenton Falls, N. Y.

DAY.	Jan.	Feb.*b*	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1911.												
1	2,096	......	*b*	1,598	6,665	1,592	251	142	239	386	955	1,741
2	2,980	......	*b*	1,219	10,181	1,303	132	147	188	531	879	1,421
3	3,105	......	*b*	803	5,133	902	244	151	142	535	709	935
4	3,018	......	*b*	821	2,463	799	139	164	368	617	1,797	879
5	2,324	......	*b*	1,175	1,688	892	230	139	273	1,627	731	877
6	2,098	......	366	1,234	1,836	2,603	175	116	265	1,094	728	979
7	1,912	......	309	2,445	1,291	1,520	166	191	817	1,405	709	1,091
8	2,013	......	306	3,205	1,949	2,463	168	212	518	1,184	2,038	1,075
9	1,261	......	282	2,738	1,465	858	139	506	679	969	1,684	410
10	872	......	312	1,946	1,696	693	213	315	1,172	736	1,339	1,587
11	786	......	240	1,824	1,466	723	181	290	678	608	1,563	2,035
12	610	......	261	1,943	1,365	588	227	192	524	1,450	1,323	3,730
13	611	......	292	2,227	1,224	2,168	200	120	652	422	2,513	7,467
14	676	......	290	2,953	1,010	2,314	184	203	654	441	1,812	5,395
15	639	......	355	4,961	712	1,577	170	118	337	892	1,337	3,162
16	482	......	341	*a*	590	1,398	139	142	522	435	996	2,145
17	572	......	343	3,215	512	1,299	259	144	458	292	665	2,509
18	475	......	354	1,939	441	1,141	273	137	279	292	1,327	2,258
19	474	......	488	1,938	493	701	263	197	296	1,453	2,400	1,575
20	502	......	304	2,146	858	506	218	130	254	1,154	2,040	1,039
21	487	......	315	1,742	771	420	191	193	244	1,124	1,577	997
22	590	......	328	1,718	540	367	142	167	233	1,249	1,042	1,037
23	*b*	......	382	1,775	1,046	297	106	147	343	2,608	667	4,431
24	*b*	......	459	1,483	1,518	350	210	147	266	2,553	830	4,331
25	*b*	......	496	3,055	1,695	316	168	147	258	1,455	747	2,497
26	*b*	......	552	4,087	1,395	272	144	135	262	957	813	1,733
27	*b*	......	683	4,899	980	343	174	97	226	788	785	1,677
28	*b*	......	2,075	5,021	696	492	141	211	276	735	671	1,257
29	*b*	......	2,436	5,748	524	387	162	1,025	297	738	1,822	1,009
30	*b*	......	2,255	5,348	488	295	93	487	373	576	1,730	1,089
31	*b*	......	1,913	......	281	......	211	284	......	577	......	963
Mean.	1,254	......	2,593	259	1,709	986	184	219	403	962	1,274	2,043

a No record. *b* Ice obstruction.

NOTE.— This table supersedes that for 1911, published on page 192, Vol. II, of the State Engineer's report for 1911.

Mean Daily Discharge, Second-feet, of West Canada Creek above Power Dam, Trenton Falls, N. Y.

DAY.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.										
1	339	2,249	1,955	1,285	202	185	*a*	611	609	304
2	327	2,376	2,310	957	160	178	*a*	1,448	1,203	414
3	307	2,194	1,442	911	204	*a*	404	942	970	4,897
4	296	1,639	1,222	809	157	493	647	732	728	3,024
5	264	1,457	2,095	658	202	263	370	694	619	1,730
6	265	2,636	1,684	605	177	*a*	405	581	524	2,310
7	258	5,555	1,784	498	106	203	417	523	814	2,090
8	263	7,111	1,895	486	179	168	356	420	7,686	1,446
9	287	4,533	1,586	420	147	168	249	367	4,577	697
10	377	3,067	1,186	371	148	204	236	364	4,421	734
11	287	2,194	937	386	139	168	234	359	1,438	735
12	280	1,674	888	302	161	265	240	1,488	1,031	445
13	261	1,614	984	260	195	295	*a*	777	814	317
14	253	2,809	1,085	278	133	199	275	775	1,142	440
15	280	4,056	1,004	243	289	235	220	575	1,353	451
16	1,479	8,608	918	264	275	255	1,734	472	1,285	415
17	2,107	10,450	1,680	272	226	223	943	426	827	388
18	1,881	7,409	2,281	276	209	158	528	339	696	360
19	1,716	7,696	1,813	272	224	209	980	628	606	359
20	1,641	5,010	1,242	257	208	225	935	1,439	529	272
21	1,314	3,324	3,457	230	138	225	760	1,213	526	1,356
22	1,153	4,449	4,451	238	291	232	604	659	531	785
23	1,132	12,050	2,372	391	290	236	443	565	472	690
24	999	6,047	1,717	274	262	244	809	1,093	437	486
25	1,636	3,218	1,332	261	206	175	1,028	2,935	486	477
26	570	2,579	1,128	255	205	240	1,870	2,994	1,506	284
27	600	4,592	845	251	208	225	1,083	1,659	355	301
28	598	5,067	616	247	97	255	696	1,383	285	315
29	856	3,065	613	199	210	180	530	986	286	206
30	1,842	2,141	2,080	112	192	194	567	866	264	407
31	2,183	......	1,536	......	186	175	......	697	......	729
Mean	841	4,381	1,617	409	191	223	650	936	1,234	931

a No record.

NOTE.— Record for January and February is defective, due to ice conditions.

Monthly Discharge of West Canada Creek above Power Dam, Trenton Falls, N. Y.
[Drainage area, 376 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1911.					
January	3,105	474	1,254	3.34	3.85
February	*b*	*b*	*b*	*b*	*b*
March	2,436	240	644	1.71	1.97
April	5,748	803	2,593	6.89	7.69
May	10,181	281	1,709	4.54	5.22
June	2,603	272	986	2.62	2.93
July	273	93	184	0.49	0.564
August	1,025	97	219	0.583	0.67
September	1,172	142	403	1.07	1.20
October	2,608	292	962	2.56	2.94
November	2,513	665	1,274	3.39	3.80
December	7,467	410	2,043	5.43	6.24

b Ice obstruction.

NOTE.— This table supersedes that for 1911 published on page 192, Vol. II, of the State Engineer's report for 1911.

Monthly Discharge of West Canada Creek, above Power Dam, Trenton Falls, N. Y.
[Drainage area, 376 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1912.					
March	2,183	253	841	2.24	2.58
April	12,050	1,457	4,381	11.65	13.43
May	4,451	613	1,617	4.30	4.96
June	1,285	112	409	1.09	1.22
July	290	97	194	0.516	0.595
August	*a*	158	223	0.593	0.684
September	*a*	220	650	1.73	1.93
October	2,994	339	936	2.49	2.87
November	7,686	264	1,234	3.28	3.66
December	4,897	206	931	2.48	2.86

a Record faulty.

WEST CANADA CREEK AT TWIN ROCK BRIDGE, NEAR GRANT, N. Y.

A current-meter gaging station was established at Twin Rock bridge, September 7, 1900, by Robert E. Horton, for the U. S. Geological Survey, by which it has since been maintained in coöperation with this Department. The bridge is 167.5 feet long between abutments, and consists of two spans. The bed is of gravel and cobble, and the entire flow passes underneath at all stages. In the winter the stream becomes completely ice-covered, requiring special discharge measurements. The gage is read each morning and evening by Frank McArthur.

The readings are taken from a gage of special design equipped with a phosphor-bronze tape, attached to the upstream side of the bridge. When the stream is obstructed by logs, the discharge is determined from special measurements. During 1900 a series of low-water measurements was made by boat at a cross-section upstream from the bridge.

The gaging section at Twin Rock bridge is affected at times by backwater from logs which are lodged in the stream, beginning near Hinckley mill-dam and extending upstream nearly to the bridge, or sometimes above the bridge. During periods of log obstruction, as also in winter, when the stream is ice-covered and contains more or less needle ice, it is necessary to estimate the discharge from special current-meter measurements and rating curves. The accompanying tables show the actual readings of the gage, but owing to the complicated conditions it is not practical to publish rating tables. It is to be understood that there is not a uniform or constant relation between the gage height and discharge.

The drainage area at point of gaging is 364 square miles.

Mean Daily Gage Height, in Feet, of West Canada Creek at Twin Rock Bridge, near Grant, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	31.84	29.94	29.96	32.80	32.38	32.24	28.53	28.56	28.84	30.27	29.66	29.32
2.....	31.51	29.90	29.78	32.60	33.59	31.82	28.53	28.54	28.54	31.93	30.58	29.91
3.....	31.20	29.83	29.76	32.24	32.43	32.18	28.60	28.92	30.05	29.79	30.78	37.08
4.....	30.68	29.75	29.72	30.68	32.66	31.02	28.56	29.18	29.94	30.25	30.28	34.78
5.....	30.60	29.70	29.68	30.90	32.07	30.60	28.54	28.80	29.20	30.12	30.06	32.82
6.....	30.14	29.65	29.55	32.37	32.62	30.68	28.44	28.66	29.56	29.74	29.74	33.24
7.....	30.23	29.64	29.55	35.44	33.50	30.26	28.42	28.52	29.75	29.46	31.12	33.26
8.....	30.08	29.64	29.46	37.50	33.32	29.93	28.37	28.46	28.92	29.30	39.64	32.61
9.....	30.20	29.56	29.48	34.98	32.26	29.72	28.35	28.45	28.72	29.41	36.66	33.21
10.....	30.34	29.54	29.56	33.35	31.54	29.55	28.32	28.51	28.57	29.14	33.66	33.00
11.....	30.28	29.68	29.48	32.04	31.02	29.44	28.38	29.03	28.63	29.36	31.91	32.24
12.....	30.19	29.56	29.45	31.40	30.87	29.18	28.54	28.98	28.83	29.62	31.22	31.09
13.....	30.08	29.60	29.48	31.19	31.12	29.24	28.44	28.80	28.67	30.24	30.82	30.90
14.....	30.08	29.48	29.52	32.58	31.30	29.14	29.14	28.68	28.58	30.24	31.52	30.91
15.....	30.00	29.46	29.72	34.41	31.26	29.06	29.56	28.88	28.57	29.74	32.15	30.64
16.....	29.97	29.44	30.60	37.76	31.10	29.25	28.69	28.82	33.50	29.42	31.64	30.60
17.....	29.88	29.40	31.78	38.82	32.71	29.30	28.52	28.69	31.08	29.27	30.91	30.28
18.....	29.90	29.42	32.06	37.16	33.45	29.06	28.55	28.83	29.84	29.16	30.40	30.38
19.....	30.28	29.50	32.04	37.50	32.66	28.92	28.57	28.86	31.02	29.86	30.07	31.99
20.....	30.56	29.73	31.98	35.29	31.88	28.82	28.52	28.84	31.23	31.85	30.08	33.95
21.....	30.71	29.88	31.54	33.60	35.60	28.76	28.70	28.81	30.61	31.16	30.00	33.22
22.....	30.58	29.90	31.22	34.84	36.34	29.04	29.51	28.83	29.80	29.83	29.82	32.54
23.....	30.37	29.92	30.86	40.42	33.94	29.08	29.12	28.88	29.60	29.68	29.66	31.56
24.....	30.22	30.18	31.03	36.42	33.04	28.76	28.73	28.91	31.09	31.24	29.52	31.88
25.....	30.08	30.11	30.43	34.25	32.40	28.74	28.60	28.88	32.92	34.82	29.70	31.82
26.....	30.02	29.98	30.04	33.30	32.06	28.73	28.48	28.89	33.28	34.01	29.56	31.18
27.....	29.94	30.00	30.10	35.44	31.61	28.72	28.41	29.20	31.50	32.56	29.50	32.05
28.....	29.88	29.96	30.11	36.10	30.66	28.57	28.46	29.14	30.37	31.50	29.48	32.80
29.....	29.94	29.96	30.58	33.96	30.34	28.52	28.57	28.96	29.88	30.86	29.72	32.86
30.....	29.98	......	32.32	33.19	33.54	28.48	28.56	28.87	29.18	30.28	29.66	33.40
31.....	30.02	......	32.52	......	32.80	......	28.56	28.84	......	29.94	......	34.16

WEST CANADA CREEK AT WILMURT, N. Y.

A gaging station was established at the highway bridge crossing West Canada creek at Wilmurt, on June 28, 1909, by this Department. This gage consists of an enameled steel scale, reading in feet and tenths from zero to 10 feet. This is attached to planking on the right-hand side of the center pier on the downstream side of the bridge. In addition a 5-foot section, reading from 10 feet to 15 feet, is attached to a telegraph pole near the Flansburgh residence. The cross-section of the stream at the location of the gage is not favorable for purposes of measurement in low water. It can be utilized at certain stages of the stream and low-water measurements can be obtained at a more favorable cross-section located at short distance downstream. The observer is Ray Hubbard, by whom gage readings are taken at 7 A. M. and 4 P. M. each day. This gaging station can be reached only by driving a distance of several miles from Prospect or Hinckley. The drainage area at the gaging station is 224 square miles. The gage is located above the limit of backwater from the proposed Hinckley reservoir, which is being constructed in connection with the State Barge canal.

Mean Daily Gage Height, in Feet, of West Canada Creek at Wilmurt, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	3.50	3.00	3.00	4.75	3.10	3.80	2.10	2.10	2.65	3.40	4.45	2.75
2	3.40	3.00	3.00	4.40	5.80	3.60	2.10	2.10	2.80	3.55	4.60	5.00
3	3.00	3.00	3.00	4.25	3.00	3.35	2.00	2.40	3.05	3.65	4.45	6.40
4	3.10	3.00	3.00	4.10	3.30	3.30	2.00	2.60	3.00	3.40	4.25	4.90
5	3.10	3.00	3.00	4.25	3.30	3.25	2.00	2.75	2.90	3.65	4.00	4.20
6	3.20	3.00	3.00	5.35	4.95	3.20	2.00	2.65	3.05	3.40	4.30	4.10
7	3.20	3.00	2.50	6.70	4.35	3.20	2.00	2.40	3.20	3.60	4.25	3.85
8	3.20	3.00	3.00	7.70	4.10	3.50	2.00	2.40	3.10	3.80	4.55	3.60
9	3.20	3.00	3.00	7.55	3.05	3.70	2.00	2.30	2.95	3.60	5.35	3.40
10	3.20	3.00	3.00	5.70	3.00	3.50	2.00	2.35	2.90	3.45	7.50	3.50
11	3.20	3.00	3.00	4.90	3.35	3.35	2.20	2.65	2.80	3.40	6.20	3.40
12	3.20	3.00	3.00	4.20	3.40	3.30	2.25	2.70	3.00	3.30	5.65	3.25
13	3.20	3.00	3.00	4.00	3.65	3.30	2.20	2.60	3.25	3.30	5.20	3.15
14	3.20	3.00	3.00	4.95	3.60	3.60	2.55	2.55	3.10	3.20	4.25	3.05
15	3.20	3.00	3.00	5.85	3.45	3.40	2.55	2.50	3.15	3.20	4.00	3.00
16	3.20	3.00	4.10	7.80	3.35	3.25	2.45	2.40	3.45	3.15	3.90	3.00
17	3.20	3.00	4.65	7.70	4.65	3.05	2.30	2.30	3.35	3.10	3.70	3.00
18	3.10	3.00	5.05	6.95	5.90	3.00	2.30	2.35	3.25	3.20	3.50	3.00
19	3.10	3.10	5.50	6.80	6.15	2.75	2.25	2.30	3.55	3.40	3.35	3.85
20	3.10	3.40	5.20	6.70	5.20	2.65	2.20	2.30	3.75	3.60	3.25	4.05
21	3.00	3.40	4.90	4.90	6.10	2.60	2.30	2.25	3.30	3.65	3.55	4.10
22	3.00	3.30	4.45	7.20	6.60	2.50	2.60	2.20	3.10	3.55	3.60	3.85
23	3.00	3.20	4.00	8.25	6.05	2.35	2.50	2.30	3.30	3.95	3.10	3.75
24	3.00	3.10	3.80	6.55	4.95	2.30	2.35	2.30	3.95	4.25	2.95	3.55
25	3.00	3.10	3.30	4.80	4.30	2.20	2.30	2.40	4.65	4.70	2.80	3.25
26	3.00	3.10	3.00	5.65	3.75	2.20	2.30	2.40	4.60	5.20	2.70	3.15
27	3.00	3.00	2.85	5.85	3.60	2.20	2.20	2.30	4.45	5.50	2.70	3.00
28	3.00	3.00	2.80	7.00	3.50	2.10	2.20	2.40	4.05	5.20	2.70	3.10
29	3.00	3.00	3.45	6.70	3.50	2.10	2.10	2.40	3.75	4.80	2.80	3.05
30	3.00	......	4.75	6.05	3.55	2.10	2.10	2.30	3.60	4.50	2.80	3.20
31	3.00	......	4.50	......	4.00	......	2.10	2.50	......	4.10	......	4.05

Current-meter Discharge Measurement of West Canada Creek at Wilmurt, N. Y.

DATE	Hydrographer.	GAGE READING.			Meter No.	Lateral interval.	Submergence depth.	Total area.	Total width.	Computed discharge.
		Beginning.	Ending.	Mean.						
1912.						Feet.		Sq. ft.	Feet.	Sec.-ft.
May 8	Barrett & Fogarty....	4.65	4.55	4.60	360	5	0.6	542	155	1,808

Mean Daily Discharge, Second-feet, of West Canada Creek at Wilmurt, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	744	410	410	2,060	476	1,000	50	98	*383	916	1,685	*267
2	676	410	410	1,630	3,700	*820	50	98	476	1,050	1,870	2,420
3	600	410	*410	1,457	410	638	48	240	638	1,150	*1,685	*a*
4	476	*410	410	1,300	600	600	48	*356	600	916	1,457	2,270
5	476	410	410	1,457	*600	570	48	443	540	1,150	1,200	1,404
6	540	410	410	2,955	2,345	540	48	383	638	*916	1,510	1,300
7	*540	410	138	**a*	1,570	540	*48	240	744	1,100	1,457	1,050
8	540	410	410	*a*	1,300	744	48	240	*676	1,300	1,805	*820
9	540	410	410	*a*	443	*916	48	190	570	1,100	2,955	676
10	540	410	*410	3,520	410	744	48	215	540	958	**a*	744
11	540	*410	410	2,270	638	638	58	*383	476	916	*a*	676
12	540	410	410	1,404	*676	600	65	410	600	820	3,440	570
13	540	410	410	1,200	868	600	58	356	782	*820	2,710	508
14	*540	410	410	*2,345	820	820	*164	325	676	744	1,457	443
15	540	410	410	3,780	710	676	164	294	*710	744	1,200	*410
16	540	410	1,300	*a*	638	*570	118	240	958	710	1,100	410
17	540	410	*1,935	*a*	1,935	443	72	190	868	676	*916	410
18	476	*410	2,490	*a*	*a*	410	72	*215	782	744	744	410
19	476	476	3,200	*a*	**a*	267	65	190	1,050	916	638	1,050
20	476	676	2,710	*a*	2,710	215	58	190	1,250	*1,100	570	1,250
21	*410	676	2,270	*2,270	*a*	190	*72	164	820	1,150	782	1,300
22	410	600	1,685	*a*	*a*	*138	190	138	*676	1,050	820	*1,050
23	410	540	1,200	*a*	*a*	85	138	190	820	1,457	476	958
24	410	476	*1,000	*a*	2,345	72	85	190	1,457	1,805	*383	782
25	410	*476	600	2,120	1,510	58	72	*240	2,345	2,420	294	570
26	410	476	410	3,440	*958	58	72	240	2,270	3,200	240	508
27	410	410	325	*a*	820	58	58	190	2,060	*3,700	240	410
28	*410	410	294	**a*	744	50	*58	240	1,570	3,200	240	476
29	410	410	710	*a*	744	50	50	240	*1,250	2,560	294	*443
30	410	......	2,060	*a*	782	*50	50	190	1,100	2,120	294	540
31	410	......	*1,740	......	1,200	......	50	294	......	1,630	......	1,250
Mean.	496	448	962	2,214	1,152	439	73	246	944	1,388	1,159	84

a Beyond limits of rating curve. * Sunday.

Monthly Discharge of West Canada Creek at Wilmurt, N. Y.
[Drainage area, 198 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1912.					
January	744	410	496	2.51	2.89
February	676	410	448	2.26	2.44
March	3,200	138	962	4.86	5.60
April	*a* 3,780	1,200	2,214	11.18	12.48
May	*a* 3,700	410	1,152	5.82	6.71
June	1,000	50	439	2.22	2.48
July	190	48	73	0.369	0.426
August	443	98	246	1.24	1.43
September	2,345	383	944	4.76	5.31
October	3,700	676	1,388	7.01	8.08
November	*a* 3,440	240	1,159	5.85	6.53
December	*a* 2,420	267	846	4.27	4.92

a Actual maximum beyond limits of rating curve.

NINE-MILE CREEK.

NINE-MILE CREEK AT POWELL'S BRIDGE, NEAR STITTVILLE, N. Y.

A gaging station was established at Powell's bridge, one mile below the village of Stittville, November 4, 1905, by C. A. Poole. Observations of the stage of the stream are taken each morning and afternoon by Mrs. Raymer Powell, from a weight-and-chain gage attached to the bottom chord on the downstream side of the bridge.

Nine-Mile creek drains a large portion of the territory on the north side of the Mohawk river between Utica and Rome, emptying into the latter stream near Oriskany. Its channel will be improved and used as a feeder for the diversion of water from West Canada creek to the summit level of the improved Erie canal, according to present plans. The drainage area above the station is 62.6 square miles.

A gaging station was maintained at this point by the U. S. Deep Waterways Commission during their survey in 1898. At that time there was a dam about 200 feet below the bridge, which has since been destroyed, leaving the flow unimpeded. The channel is of rock, of uniform cross-section and straight for several hundred feet each way from the bridge, and the conditions are favorable for current-meter discharge measurements, except in times of very low water. Measurements are made from the upstream side of the bridge.

Owing to the sluggish velocity at low stages the record for very low-water conditions is considered to be roughly approximate only.

Mean Daily Discharge, Second-feet, of Nine-Mile Creek at Powell's Bridge, near Stittville, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	132	262	299	*b*	360	65	19	19	*37	65	46	*56
2.....	144	262	299	2,524	338	*46	19	37	46	86	56	65
3.....	108	262	*299	2,423	299	65	19	65	56	338	*56	65
4.....	97	*262	299	708	280	86	19	*56	75	408	56	65
5.....	97	299	299	1,508	*280	108	11	37	75	434	56	132
6.....	97	299	299	*b*	360	56	11	19	75	*115	56	120
7.....	*97	299	299	**b*	384	65	*19	28	86	108	56	120
8.....	97	299	299	2,524	108	65	19	37	*75	132	46	*108
9.....	97	299	299	2,321	108	*56	19	37	75	318	56	132
10.....	97	299	*299	708	97	56	19	37	97	408	*56	120
11.....	97	*299	318	1,090	75	56	19	*37	75	318	65	120
12.....	97	299	338	1,815	*86	56	19	37	108	299	86	97
13.....	97	299	338	2,016	170	46	19	37	108	*299	97	75
14.....	*75	299	384	*524	318	37	*19	37	97	144	1,915	75
15.....	75	299	384	524	360	46	19	56	*86	108	360	*75
16.....	75	299	434	590	384	*75	19	65	86	56	299	65
17.....	75	299	*434	1,611	408	86	19	65	97	46	*75	56
18.....	318	*299	492	1,304	360	75	19	*75	75	37	46	65
19.....	434	*a*	492	1,611	*360	65	19	56	86	408	56	56
20.....	97	*a*	524	524	785	65	19	56	108	*338	65	56
21.....	*75	*a*	556	*360	785	46	*19	56	108	86	65	56
22.....	299	*a*	556	338	360	37	37	65	*132	65	65	*56
23.....	299	*a*	556	318	318	*37	46	75	120	75	86	56
24.....	299	*a*	*590	384	108	37	46	75	556	1,611	*97	56
25.....	299	*384	590	360	86	37	37	*75	434	408	108	56
26.....	299	1,406	638	299	*56	19	19	65	338	213	97	65
27.....	299	318	1,406	262	56	19	19	75	318	*157	65	65
28.....	*299	299	1,611	*318	86	19	*19	86	132	108	56	75
29.....	262	299	*b*	360	184	19	19	108	*384	75	56	*75
30.....	262	......	*b*	360	318	*19	19	120	408	75	56	97
31.....	262	......	**b*	......	198	......	19	120	......	56	......	462
Mean.	176	345	487	1,025	273	52	21	58	152	239	145	92

a No record. *b* Gage height above limit of rating table. * Sunday.

Monthly Discharge of Nine-Mile Creek at Powell's Bridge, near Stittville, N. Y.
[Drainage area, 59 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1912.					
January	434	75	176	2.98	3.44
February a	1,406	266	345	5.85	6.31
March	b 1,611	299	487	8.25	9.51
April	b 2,524	266	1,025	17.37	19.38
May	785	56	273	4.63	5.34
June	108	19	52	0.881	0.983
July	46	11	21	0.356	0.41
August	120	19	58	0.983	1.13
September	556	37	152	2.58	2.88
October	1,611	37	239	4.05	4.67
November	1,915	46	145	2.46	2.74
December	462	56	92	1.56	1.80

a No record during February 19–24.
b Actual maximum above limit of rating table.

PRECIPITATION RECORDS.

Rain gages have been established by this Department at several places on the Mohawk drainage area. Precipitation records have been kept as follows:

Daily Precipitation, in Inches, at Tribes Hill, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1				0.40					0.80	0.40		
2				0.50						0.30		0.80
3						0.70		0.90	0.70			
4						0.20						
5					0.30							
6					0.60	0.20			0.50			
7				0.40							1.10	
8			0.10									
9				0.30								
10								1.10		0.70		
11									0.40	1.10		
12										0.90		
13			0.40									
14				0.10			0.80					
15	0.10		0.70			0.20			0.80			
16												
17	0.20											
18				0.20	1.10			0.60				
19							0.20		0.70	0.40		1.20
20					0.40							
21		0.10	0.60		0.30		0.70					
22		0.10		0.20				0.60				
23	0.40							0.80	1.10			
24			0.60	0.10	0.10						0.90	0.20
25					0.10				0.90			
26		0.10						0.60		2.10		
27		0.40										0.40
28												
29	0.70		0.80	0.60	0.10		0.30		0.50			
30									0.20			0.50
31							0.20					

Daily Precipitation, in Inches, at Utica, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1		0.15		0.44				0.10	0.55			
2	0.30			0.26							0.14	
3		0.08		0.50		0.73		0.85	0.26			0.75
4							0.04	0.17				
5	0.10	0.12				0.07	0.07					
6	0.08				0.07				1.58			
7					0.70	0.07					0.10	
8				0.67							1.00	
9			0.18		0.03		0.15				0.08	
10		0.07		0.40	0.30			0.15		0.37	0.09	0.29
11								0.38		0.33		
12								0.05	0.51	0.30		0.16
13			0.47									0.06
14				0.06			0.65	0.26	0.14		0.57	
15			0.36	0.09				0.15	0.17		0.09	
16	0.20		0.28	0.12			0.10		0.73			0.32
17					0.60							
18	0.18			0.12	0.33			0.31		0.16		0.05
19	0.56			0.22			0.07		0.93			0.60
20	0.10	0.30		0.05		0.15						
21		0.18	0.46		0.33		0.03					
22		1.00	0.07	0.40	0.40		0.53					
23	0.29	0.06			0.27			0.04	0.09			
24			0.50					0.32	1.50	0.67	0.19	
25	0.20		0.04	0.18					0.90	0.41	0.27	0.20
26											0.19	
27		0.77										0.70
28		0.17										
29	0.26	0.12	0.36				0.35		0.12			
30	0.20		0.40	0.62	0.65				0.12			0.22
31					0.07		0.04					0.20

Daily Precipitation, in Inches, at Graefenburg, near Utica, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	*0.15	0.08		0.50				0.06		0.24		
2	*0.02	0.02		0.30					1.20	0.26	0.18	
3		0.05	*0.04	*0.30		0.72		0.51	0.17			0.15
4		0.02	*0.01					0.20		0.11		
5	*0.08	0.03		0.10		0.32						
6	*0.03	0.01			0.29				2.10			0.25
7		0.02			0.18	0.28			0.10		0.08	
8		0.05		0.77							1.86	0.05
9	*0.25		*0.11	*0.05			0.34	0.07			0.08	*0.09
10	*0.04	0.03		*0.33	0.28			0.39		0.31	0.10	
11	*0.03		*0.02					0.03		0.44		
12				0.03					0.51	0.05		
13			*0.55	0.24	0.28	0.07					0.05	
14			*0.04	0.03			0.36	0.21			0.65	
15	*0.02		*0.08	0.07					0.17		0.08	
16	*0.03		0.35	0.04		0.13	0.09		0.57			0.09
17	*0.04				0.64			0.33				
18	*0.12			0.17	0.35			0.03			0.05	0.04
19	*0.23			0.26			0.18	0.05	0.82	0.13		0.50
20	*0.02	*0.31		0.06		0.05			0.13	0.07		*0.09
21			*0.07		0.36	0.04			0.04			*0.06
22		*1.20	*0.20		0.53		0.61	0.03				*0.02
23	*0.13	0.05	*0.06	0.40								
24	*0.05	0.05	*0.25	0.04					1.25	0.90		
25	*0.06		*0.05	0.14	0.02				1.32	0.85	0.50	*0.14
26	*0.02							0.09	0.11	0.06	0.02	
27	*0.02	0.85	*0.15	0.04					0.09	0.04		
28		0.05										*0.26
29		0.03	0.35				0.24		0.05			*0.04
30	*0.28		0.40	0.74	1.09		0.03		0.15			
31	*0.05				0.10		0.02					*0.16

* Snow.

Daily Precipitation, in Inches, at Deerfield Reservoir, near Utica, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	*0.12	*0.03	*0.02	0.49				0.03	0.08	0.16		
2	*0.01			0.31					0.49	0.31	0.09	
3		*0.04		0.41		0.63		0.80	0.08		T	*0.13
4		*0.02					T	0.11	T	0.09		
5	*0.01	*T		0.07			0.06	0.03		T		
6	*T	*T			0.23			0.01	1.48			0.76
7	*T	*0.03			0.49	0.13			0.04		0.10	*0.04
8		*0.08		0.68				T		T	0.73	*0.07
9	*0.10		*0.16	T	T		0.23	T			0.06	*0.01
10			*T	0.18	0.38			0.06		0.25	0.09	
11	*0.02		*T					0.51	0.01	0.42		
12			*0.01	0.01	0.03			0.06	0.50	0.04		
13			*0.37	0.06	0.13	0.05				0.08	0.02	*T
14			*0.05	0.05	0.13		0.32	0.38			0.60	
15	*0.01		0.24	0.09	0.03			0.02	0.29		0.05	
16	*0.06		*0.30	0.01	T	0.25	0.02	T	0.80	0.01	T	0.27
17	*0.01				0.44	0.01					T	
18	*0.05			0.15	0.32			0.37			0.01	0.04
19	*0.41	*0.10		0.15	0.01		0.09	0.03	0.55	0.12		0.71
20	*0.01	*0.38	*0.03	0.03	T	T		T	0.07	0.07		*0.03
21	*0.01		*0.09		0.46	T	0.06		0.01			*0.05
22	*T	*0.90	*0.12		0.48		0.44	0.11				
23	*0.15		*0.01	0.39	T			0.21	T			*0.01
24	*0.06	*0.03	*0.28		0.01			0.17	1.30	0.55	0.09	*0.05
25	*0.04		*0.12	0.45	T			0.08	0.78	0.50	0.80	*0.09
26				T			T		0.06	0.09	0.01	
27	*0.02	*0.76	*0.03	0.06				0.35	0.09	0.05		
28		*0.02		T				T			T	*0.14
29	*0.07	*0.01	0.51		T		0.24		0.05			*T
30	*0.17		*0.40	0.47	0.87		0.01		0.14			
31	*0.06				0.09		0.10					0.33

* Snow. T means trace.

Daily Precipitation, in Inches, at Savage Reservoir, near Utica, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	0.14	0.07	0.01	0.49				0.09		0.27		
2	*0.03	0.02	0.01	*0.33					1.23	0.27	0.29	
3		0.06	0.03	*0.59		0.76		0.64	0.21		0.04	0.22
4		0.02						0.26		0.08		
5	*0.07	0.04	0.01	0.09		0.42	0.02					
6	*0.02	0.01			0.28				2.26			0.48
7		0.02			0.34	0.29			0.23		0.12	*0.01
8	*0.01	0.07		*0.81							1.80	*0.05
9	*0.20		*0.18	*0.03	0.02		0.52				0.22	*0.06
10	*0.04	0.03		*0.34	0.53			0.14		0.57	0.10	
11	*0.03		0.02					0.52	0.02	0.46		
12			0.01	*0.03	0.02			0.06	0.69	0.20		
13			*0.54	*0.30	0.23	0.18					0.05	
14			0.06	0.02	0.02		0.20	0.16			0.69	
15	*0.02		*0.29	0.05	0.02			0.08	0.34		0.09	
16	*0.06		0.31	0.02		0.16	0.04		0.58	0.01	*0.02	0.21
17	*0.02				0.56	0.18						
18	*0.11			0.15	0.38			0.22			*0.20	0.06
19	0.30	0.06		0.27			0.26	0.06	0.89	0.21		0.61
20	*0.06	*0.38	0.01	*0.04		0.06		0.20	0.10	0.07		0.12
21	*0.01		0.07		0.52	0.03	0.02		0.09			*0.06
22		*1.15	0.18		0.51		0.59					*0 03
23	*0.14	0.06		0.38						0.01		
24	*0.05	0.05	0.27	*0.02				0.26	1.69	1.08	0.11	*0.02
25	*0.07		0.15	0.10	0.26			0.06	1.35	0.81	*0.71	*0.19
26	*0.01						0.02		0.21	0.11	0.06	
27	*0.02	*0.90	0.07	0.02				0.22	0.24	0.10		
28	*0.02	0.06		0.01								*0.27
29	*0.11	0.02	0.36		0.89		0.26		0.08			*0 02
30	*0.21		0.46	*0.69	0.16				0.21			
31	*0.06						0.02					0.28

* Snow.

Daily Precipitation, in Inches, at Trenton Falls, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	0.18			0.20						T		
2	0.06			0.25					0.10	0.62	0.28	
3		0.09		0.28		0.45		1.15	0.38			0.43
4		T				T	0.02	0.05		0.22		
5	0.05	T		0.03			0.18	T				
6	T	T			0.19				0.48			0.27
7	T				0.54	0.09					0.43	0.07
8	T	0.16		0.28							1.23	
9	0.18		0.08		0.07						0.18	0.65
10	0.02			0.31	0.19			0.10		0.18		
11	T						T	0.43		0.23		
12			0.40	T				0.05	0.42	0.21		0.04
13			T		0.46	T				0.19	0.08	0.12
14					0.12		1.03	0.10			0.68	
15	0.20		0.38	0.13			0.08	0.03	0.06		0.07	
16	0.04		0.09	0.05		0.31	0.10	T	1.26			0.28
17	T				0.84	T						
18	0.20			0.18	0.13			0.30			T	T
19	0.52	0.48		0.19	T		T	0.18	0.82	1.10		0.70
20	T	0.38	0.04	0.03						0.03		0.67
21	0.01		0.18		1.30				T			0.03
22	0.01	1.07	T		0.42		0.93	0.65				
23	0.30	0.04	T	0.82				0.40				T
24	0.11	T	0.52	0.10				0.15	1.18	0.67	T	0.07
25	T			0.15	0.20			0.10	0.53	1.08	0.92	0.18
26									0.07	0.06	T	
27		0.95	0.20	0.18				0.52	0.03			
28	T	0.04		T								0.10
29	0.30	T	0.40		0.12		0.06					0.10
30	0.38		0.24	0.31	1.43				0.38	T	T	T
31	0.08				0.20		0.11					0.98

T means trace.

Daily Precipitation, in Inches, at Twin Rock Bridge, near Grant, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	0.20			0.32						0.07		
2				0.68					0.49	0.50	0.35	
3				*0.21		0.48		0.89	0.42			1.52
4							0.04			0.27		0.41
5	*0.08						0.06	0.14				
6					0.43				1.19			
7					0.15				0.02		0.56	*0.08
8		*0.18		*0.36							1.41	
9	*0.29	*0.03	*0.18								0.18	
10	*0.15			*0.34	0.17			0.14		0.16	0.02	
11								0.48		0.23		
12					0.05			0.07	0.49	0.04		*0.14
13			*0.37		0.41	0.10				0.12	0.04	*0.18
14				0.04	0.15		0.93	0.11			0.60	*0.92
15	*0.15		0.45	0.21	0.02			0.01				
16			0.63	0.36		0.16	0.02		1.15			*0.18
17					0.60	0.05						
18	*0.20			0.23	0.32			0.22	0.16			
19	0.65	*0.38		0.21			0.08	0.07	1.00	1.20		0.77
20				0.03				0.02	0.12			*0.34
21	*0.09	0.47	*0.22		1.43				0.04			
22		*1.02	*0.12		0.34		0.67	0.31				
23	*0.39	*0.28		1.03				0.36				
24	*0.19	*0.05	*0.21					0.12	0.99	0.53	*0.12	
25				0.09				0.11	0.74	0.99	*0.54	*0.10
26										0.20		
27		*0.76	*0.16	0.14				0.38	0.13			
28		*0.06										*0.11
29	*0.19		0.55		0.17		0.06					*0.13
30	*0.30		0.16	0.19	1.77		0.10		0.50	0.14	*0.04	
31	*0.09				0.26		0.08					*1.02

* Snow.

Daily Precipitation, in Inches, at Hoffmeister, N. Y.

DAY.	Jan.	Feb.	March.	April.	May.	June.	July.	August.	Sept.	October.	November.	December.
1912.												
1	0.02*	T*	T*	0.66*					0.55	0.60 (T*)	0.75	
2		T*	0.03*			0.44					T*	1.35
3		0.14*		T*		T			1.01			
4				0.06§		0.08	0.25	1.29		0.89		
5	0.13*	T*			0.57			T	0.52			
6		0.11*	T*			0.10			T		3.15	0.45
7	0.18*			0.78*				0.03		0.02		T*
8	0.51*		0.19*			T					0.07 (T*)	
9		T*			0.12		0.11	0.96		0.30	T*	
10							0.40		T			
11				T*			0.35		0.64	0.24		0.39*
12	0.15*		0.40*		0.21 (T*)	0.18				0.15	T	
13							1.51				0.41 (T*)	
14	0.45*			0.24	T			0.47	T			
15			0.64§			0.21		0.04	1.94	0.03§	T*	
16					1.05	0.05						
17	T*			0.45	0.59†						0.09*	T*
18	0.50						0.09	0.18	1.40			0.25*
19	0.21*	0.42*	0.05	T*	T		T	0.07		0.91		
20					2.15				T			
21		2.26*	0.44*			0.08	1.25	0.38				
22	0.47*			0.54§								0.22*
23									0.63			T*
24			0.65*	0.10*	0.01			0.11	T	1.77	1.02*	
25		T*			T				1.02		0.13*	
26		1.80*	0.11*	0.20		T		0.30	0.07		0.13*	
27	T*			T				T				0.56*
28												
29	0.48*		0.69	0.09*	0.16		0.03		0.35			
30					0.51				T	0.02		0.61 (T*)
31	T*		0.25					0.10				

* Snow. T means trace. § Rain and snow. † Rain and hail.

UPPER HUDSON RIVER DRAINAGE BASIN.

DESCRIPTION.

Upper Hudson river comprises the drainage basin above tidewater influence at Troy and also above the mouth of Mohawk river at Waterford.

The head-water region is mountainous in character, in general heavily wooded, and dotted with numerous lakes and ponds. The rocks, belonging to the oldest formation and mainly granite, are either bare or covered with only a layer of spruce duff, humus and forest litter. The river emerges from the mountain region a few miles west of Glens Falls, and thence to Troy the topography is moderately rolling and the surface soil is chiefly sand.

The fall in the upper portion of the course is very rapid, amounting to about 64 feet per mile from Lake Tear-of-the-Clouds to North creek, a distance of about 52 miles. From the mouth of North creek to the mouth of the Sacandaga the descent is nearly 14 feet per mile, distributed among rapids which diminish in frequency as the Sacandaga is approached. In the succeeding 26 miles to Fort Edward the river descends 418 feet more, but of this, 175 feet is comprised within the three abrupt pitches at Palmer, Glens and Bakers falls, while most of the remainder occurs in the rapids between Jessups Landing and the oxbow above Glens Falls. Between Glens Falls and Troy nearly the entire fall of the river is utilized for the development of water-power.

The flow of the upper Hudson is controlled to some extent during the dry season by the use of Indian lake storage reservoir, and the facilities for storage works in this part of the basin are unsurpassed. The entire region is dotted with ponds and lakes, many of them of large size and fed from extensive drainage areas. Saratoga lake serves as a regulator of Fish creek, and there is a small reservoir at the head waters of the Hoosic.

UPPER HUDSON RIVER WATER-SURFACE ELEVATION RECORDS.

The following tables give records of the mean daily elevation of water-surface for 1912. The elevations are referred to Barge canal datum.

The tables of elevations of water-surface are arranged in order, proceeding upstream from the State dam at Troy to Glens Falls.

An accompanying table gives details as to the types of gages used, the datum of each and the manner in which readings are taken.

Water-surface Elevation Gages Maintained on Hudson River and Tributaries During the Year 1912.

LOCATION.	Date established.	Observer.	Elevation of zero mark (B. C. datum).	Type of gage.	Subdivision of gage.	Readings taken to
Hudson river:						
Troy, below dam	Jan. 19, 1903	John B. Mackey	-0.09	Staff	1/10 foot	1/10 foot
Troy, above dam	"	John B. Mackey	9.27	"	1/10 "	1/10 "
Mechanicville, below Adirondack E. P. Corp.'s dam	Aug. 18, 1905	E. H. Stickney	29.00	"	1/10 "	1/10 "
Mechanicville, above Adirondack E. P. Corp.'s dam	"	E. H. Stickney	43.00	"	1/10 "	1/10 "
Mechanicville, at Toll bridge	Aug. 16, 1905	Wm. E. Downing	48.77	"	1/10 "	1/10 "
Mechanicville, at B. & M. R. R. bridge	Aug. 15, 1905	Wm. H. Sigsworth	66.50	"	1/10 "	1/10 "
Stillwater, below dam	July 15, 1909	John F. Hickey	74.73	"	1/10 "	1/10 "
Stillwater, at highway bridge	Aug. 1, 1908	John F. Hickey	81.29	"	1/10 "	1/10 "
Schuylerville, at Toll bridge	Aug. 14, 1905	Ed. Durkin	81.50	"	1/10 "	1/10 "
Liberty Mills, at Free bridge	Oct. 23, 1905	Wm. B. Dunston	83.12	Chain	1/10 "	1/10 "
Northumberland, above dam	April 11, 1904	P. F. Gleason	100.58	"	1/10 "	1/10 "
Fort Miller, below dam	May 1, 1904	Leon C. Brazier	100.00	Staff	1/10 "	1/10 "
Fort Miller, above dam	April 11, 1904	Leon C. Brazier	113.70	"	1/10 "	1/10 "
Crocker's Reef, above dam	"	J. H. Donnelly, Jr.	114.86	"	1/10 "	1/10 "
Fort Edward, at Bridge street	"	Benj. F. Thebo	117.87	"	1/10 "	1/10 "
Fort Edward, below I. P. Co.'s dam	1906	F. E. Chapman	121.47	"	Inch	Inch
Fort Edward, above I. P. Co.'s dam	"	F. E. Chapman	139.83	"	1/10 foot	1/10 foot
Glens Falls	Mar. 9, 1905	A. B. Fisher	277.97	"	1/10 "	1/10 "
Corinth	Oct. 1, 1906	E. H. Bowker	*	"	1/10 "	1/10 "
Hoosic river — Hoosic Falls	April 3, 1904	S. L. Cluett	*	"	1/10 "	1/10 "
Sacandaga river — Northville	Feb. 1904	P. C. Pickard	738.51a	Chain	1/10 "	1/10 "
Lake Champlain — Whitehall	Jan. 22, 1905	Geo. P. Noyes	93.00	Staff	1/10 "	1/10 "

* Arbitrary datum. a U. S. Weather Bureau datum.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Hudson River below State Dam at Troy, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	4.96	3.91	4.26	14.41	8.76	7.16	3.01	2.66	3.66	3.56	4.16	3.81
2.....	5.01	3.86	4.16	13.66	7.76	6.86	2.66	3.51	3.66	3.36	3.86	3.76
3.....	5.16	4.11	3.86	13.51	7.16	6.71	2.71	3.76	2.86	2.86	4.76	4.71
4.....	5.01	3.76	4.11	11.16	6.36	5.66	2.16	2.11	3.51	3.06	4.61	5.36
5.....	4.91	3.61	4.01	10.76	6.26	5.61	1.96	2.06	3.31	3.01	4.71	9.01
6.....	4.41	3.71	4.11	14.26	6.66	4.86	2.61	1.91	3.11	3.16	4.86	8.16
7.....	4.26	3.61	4.51	15.16	6.86	4.36	1.76	2.16	2.96	3.01	5.86	7.21
8.....	4.01	3.81	4.36	19.16	6.61	4.66	2.31	1.96	3.06	3.16	6.66	7.16
9.....	4.26	3.71	4.56	17.16	6.41	4.16	1.66	2.61	3.01	2.76	6.61	7.01
10.....	4.01	3.51	5.06	14.51	7.11	3.36	1.51	2.51	2.76	3.51	7.51	6.16
11.....	3.76	3.51	4.66	14.76	6.86	4.01	2.06	2.86	3.06	3.41	7.91	5.11
12.....	3.86	3.66	5.21	14.16	6.16	4.61	1.66	3.26	2.96	2.86	7.26	5.16
13.....	3.81	3.86	7.11	12.51	4.76	4.21	2.11	3.66	3.51	2.91	7.11	4.96
14.....	3.71	3.66	9.66	13.26	4.16	4.31	2.06	4.21	2.76	3.11	7.01	5.06
15.....	3.76	3.46	12.76	12.41	5.71	4.01	1.96	3.76	3.11	3.06	6.26	5.06
16.....	3.71	3.71	15.26	11.66	5.76	3.66	2.16	3.76	2.61	3.26	6.31	4.46
17.....	3.81	3.71	13.01	12.16	6.71	3.16	1.96	3.61	3.01	2.96	5.16	3.96
18.....	3.91	3.61	13.01	14.21	6.66	3.21	1.76	3.46	3.16	2.96	5.01	4.11
19.....	4.06	3.86	13.41	15.66	7.76	3.11	1.66	3.51	2.96	3.61	4.76	4.81
20.....	4.26	4.36	11.91	15.31	7.41	2.86	2.06	4.51	3.36	3.26	4.96	5.16
21.....	3.66	4.26	9.91	15.16	7.16	2.76	1.61	4.66	2.91	3.41	4.61	5.11
22.....	4.06	4.11	7.81	13.76	7.21	2.66	1.76	4.51	4.01	3.76	4.96	4.71
23.....	3.66	4.46	6.66	11.76	7.66	2.76	1.86	4.71	4.26	4.86	4.76	4.61
24.....	3.96	4.16	6.16	11.16	8.86	3.01	1.66	5.36	4.11	7.36	4.16	4.06
25.....	4.11	4.11	6.16	11.96	9.16	3.31	2.01	4.61	4.16	10.66	4.71	4.61
26.....	3.96	3.91	5.76	11.26	6.86	1.66	1.76	4.01	4.31	10.16	3.81	5.26
27.....	3.71	4.06	5.51	10.66	6.66	2.31	1.96	4.11	4.46	9.76	3.96	5.51
28.....	3.51	4.06	5.16	10.26	6.26	2.21	2.11	3.46	4.91	7.26	3.76	5.71
29.....	3.66	4.16	5.76	9.66	6.66	2.16	2.01	3.01	4.86	6.66	3.81	4.86
30.....	3.81	......	13.76	9.11	6.41	2.66	2.01	3.51	4.11	4.46	3.76	4.76
31.....	3.81	......	13.91	......	6.81	......	2.16	3.16	......	4.51	......	5.11

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Hudson River above State Dam at Troy, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	14.52	13.47	14.77	19.52	17.07	16.07	14.37	14.22	14.97	15.87	15.72	*a*
2.....	14.77	13.32	14.77	19.07	16.77	16.07	14.52	14.17	14.87	15.62	15.62	*a*
3.....	14.62	13.37	12.37	18.77	16.47	15.92	14.57	14.77	15.02	15.27	15.62	15.67
4.....	14.57	13.62	13.87	17.77	15.77	15.82	14.67	14.52	14.87	15.22	15.32	15.97
5.....	14.02	13.57	13.62	17.57	15.77	15.47	14.67	14.32	14.82	15.07	15.52	17.32
6.....	13.72	13.57	13.57	18.97	15.82	15.17	14.57	14.57	14.87	15.02	15.67	16.87
7.....	13.52	13.62	14.07	19.97	15.87	14.87	14.42	14.47	14.77	14.87	15.82	16.97
8.....	13.52	13.47	14.02	21.42	15.77	14.87	14.27	14.47	14.87	14.77	16.47	16.92
9.....	13.47	13.42	14.22	20.52	15.97	14.27	14.27	14.22	14.72	14.92	16.52	16.52
10.....	13.47	13.42	14.42	19.17	16.22	14.22	14.77	14.37	14.77	14.87	17.27	15.92
11.....	13.57	13.47	14.72	19.02	16.17	14.27	14.67	14.47	14.72	14.77	17.22	15.62
12.....	13.62	13.37	15.07	18.97	15.87	14.52	14.62	14.67	14.82	14.82	17.07	15.42
13.....	13.72	13.47	14.97	18.52	15.42	14.27	14.72	14.67	14.37	14.92	17.02	15.37
14.....	13.87	13.42	15.27	18.27	14.97	14.17	14.47	14.87	14.22	14.72	16.92	15.27
15.....	13.47	13.57	16.02	17.82	15.27	14.07	14.27	15.07	14.47	14.67	16.47	15.27
16.....	13.37	13.42	19.52	17.37	15.17	13.97	14.12	14.87	14.37	14.77	16.42	15.22
17.....	13.47	13.52	17.87	17.62	15.77	14.02	14.17	14.77	14.42	14.82	15.97	15.12
18.....	13.37	13.52	17.77	18.77	15.97	13.87	14.57	14.67	14.57	14.82	15.92	14.97
19.....	13.37	13.47	17.37	20.27	15.87	13.92	14.52	14.82	14.67	14.82	15.87	14.97
20.....	13.52	13.77	17.12	19.62	15.77	13.87	14.47	14.67	14.82	14.72	15.72	15.77
21.....	13.72	13.92	17.17	19.12	15.67	13.87	14.27	14.67	14.77	14.77	15.77	15.87
22.....	13.77	13.67	16.77	18.52	15.87	13.82	14.32	14.87	15.12	15.07	15.72	15.47
23.....	13.77	13.92	16.27	17.97	16.37	13.77	14.17	14.72	15.27	15.92	15.52	15.52
24.....	13.72	14.12	15.97	17.87	17.02	14.37	14.22	14.82	15.42	16.62	*a*	15.42
25.....	13.67	14.22	15.77	17.72	17.07	14.97	14.27	14.87	15.77	18.12	*a*	15.32
26.....	13.57	14.37	15.67	17.47	15.87	14.77	14.12	14.87	16.12	17.77	*a*	15.82
27.....	13.57	14.67	15.57	17.27	15.77	14.82	14.07	14.82	16.17	17.47	*a*	16.57
28.....	13.77	14.62	14.97	17.27	15.47	14.67	14.27	14.97	16.07	16.92	*a*	16.82
29.....	13.57	14.72	16.02	17.22	15.37	14.62	14.22	15.02	16.02	16.27	*a*	14.82
30.....	13.52	......	18.72	17.17	15.87	14.57	14.07	15.07	15.97	15.82	*a*	14.72
31.....	13.52	......	18.97	......	15.92	......	14.27	15.02	......	15.77	......	14.72

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Hudson River below Dam of Adirondack Electric Power Corporation, near Mechanicville, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	33.35	32.50	32.15	36.35	34.45	34.25	31.35	31.00	31.20	31.20	32.40	31.20
2.....	33.60	32.10	32.60	36.65	34.15	33.55	31.15	30.85	30.80	31.20	32.15	31.70
3.....	33.35	32.45	31.80	36.55	33.75	33.65	31.00	30.90	30.90	31.05	31.60	31.95
4.....	33.10	31.80	32.45	36.00	33.65	33.40	30.85	30.80	30.60	31.20	32.25	33.15
5.....	32.95	32.55	32.30	36.10	32.65	33.10	30.55	30.60	31.35	31.00	31.85	33.60
6.....	33.00	32.70	32.05	37.10	33.55	32.80	31.30	30.65	31.25	30.60	31.75	33.40
7.....	32.30	32.35	31.30	38.50	33.30	32.65	30.90	30.95	31.35	30.90	31.80	33.55
8.....	32.90	32.35	31.85	40.60	33.50	32.40	30.65	31.05	31.60	30.90	33.25	33.30
9.....	32.55	32.10	32.40	39.95	33.10	31.90	31.15	30.45	31.10	30.65	34.50	33.40
10.....	33.00	32.20	32.10	38.65	33.40	32.35	30.95	30.90	31.60	30.60	34.50	32.80
11.....	33.10	31.70	32.30	36.65	32.85	32.35	31.10	30.75	31.25	30.50	34.40	32.55
12.....	33.10	31.75	32.35	36.75	32.45	32.30	31.05	30.95	31.15	30.80	34.10	32.30
13.....	32.75	32.65	35.80	36.10	32.60	32.20	31.10	31.40	31.15	29.80	33.35	32.20
14.....	32.15	31.25	34.65	35.55	32.90	32.20	30.60	31.10	31.00	30.75	33.10	31.90
15.....	32.05	31.75	34.05	36.10	33.10	32.20	31.05	31.10	30.85	30.05	33.20	31.40
16.....	32.20	31.70	*a*	36.55	33.05	31.25	31.20	31.20	31.65	30.75	33.20	31.95
17.....	32.25	31.75	*a*	37.75	33.25	31.20	30.95	31.10	32.05	31.40	32.80	31.85
18.....	32.20	31.80	36.10	38.65	33.60	31.90	31.00	30.40	32.15	31.00	32.85	31.70
19.....	32.35	31.85	36.20	38.95	33.60	31.90	30.95	31.10	32.20	31.05	32.50	31.85
20.....	32.75	32.20	36.20	38.85	33.60	31.85	31.15	31.10	32.15	30.70	32.35	32.15
21.....	32.30	32.45	35.45	38.35	33.50	31.90	30.65	31.00	31.70	30.95	32.25	32.30
22.....	33.10	32.50	34.55	37.15	34.60	31.70	30.80	31.10	31.35	31.15	32.15	31.60
23.....	32.75	32.50	34.20	37.00	35.20	31.20	31.10	31.05	31.45	31.00	32.00	32.05
24.....	32.70	32.35	33.80	37.55	34.95	31.60	31.40	31.20	31.25	33.45	31.25	31.90
25.....	32.65	32.30	33.85	37.60	34.70	31.95	31.05	30.90	31.15	35.20	32.30	31.70
26.....	32.35	32.70	32.95	36.85	34.30	31.55	31.40	31.10	31.00	34.75	32.20	32.05
27.....	32.35	32.90	33.15	35.65	34.20	31.15	31.15	31.35	31.15	34.10	32.00	31.80
28.....	31.60	32.50	33.10	35.50	33.55	31.25	30.75	31.10	31.40	34.05	31.90	31.65
29.....	32.65	32.50	35.35	35.40	33.65	31.20	30.65	31.25	31.05	33.70	31.70	30.80
30.....	32.75	......	36.75	35.35	33.55	31.35	30.75	31.20	31.75	32.75	31.70	31.85
31.....	32.10	......	35.60	......	34.40	......	30.80	31.05	......	32.45	......	32.90

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Hudson River above Dam of Adirondack Electric Power Corporation, near Mechanicville, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	49.10	48.95	48.90	51.35	50.55	50.70	48.70	48.70	48.95	48.75	49.10	48.05
2.....	48.85	49.00	49.30	51.60	50.40	50.35	48.85	48.70	48.70	49.05	49.20	48.20
3.....	48.70	49.30	49.10	51.55	50.05	50.45	48.75	48.65	48.80	48.95	48.90	48.70
4.....	48.30	48.70	49.40	51.10	49.80	50.10	48.40	48.10	48.50	48.80	49.50	49.95
5.....	48.55	49.50	49.15	51.20	49.25	49.75	48.55	48.65	48.80	48.90	49.05	50.15
6.....	48.20	49.00	48.90	51.75	50.15	49.45	48.65	48.70	48.70	48.55	48.95	50.35
7.....	48.10	49.10	49.10	52.45	49.95	49.40	48.45	48.80	48.75	48.80	49.10	50.30
8.....	48.05	49.00	49.10	53.85	50.10	49.40	48.40	48.85	48.90	48.80	49.75	49.95
9.....	48.00	49.25	49.00	53.30	49.65	49.40	48.20	48.75	48.50	49.00	50.65	50.05
10.....	48.20	49.15	48.90	52.95	49.80	48.95	48.65	49.00	48.90	48.85	50.65	49.15
11.....	47.60	48.60	49.15	52.30	49.40	48.60	48.65	48.60	48.65	48.95	50.40	48.95
12.....	48.20	49.15	49.15	51.80	49.75	48.50	48.70	48.40	48.55	48.70	49.90	48.75
13.....	48.45	49.00	51.15	51.35	49.40	48.60	48.35	48.80	48.75	47.60	49.65	49.70
14.....	47.15	49.00	49.95	51.55	49.70	49.10	48.20	48.60	48.50	49.10	49.45	48.65
15.....	48.05	49.05	49.90	51.50	50.05	48.75	48.65	48.90	48.35	49.25	49.80	48.45
16.....	47.40	48.95	52.40	51.95	49.90	48.85	48.60	48.90	48.90	49.35	49.55	49.25
17.....	47.90	48.60	50.85	52.55	50.40	49.10	48.65	48.80	49.45	49.10	49.30	49.40
18.....	48.75	48.65	50.95	52.80	50.35	49.25	48.70	48.50	49.00	48.60	49.45	48.80
19.....	48.90	49.25	50.90	53.00	50.40	48.20	47.95	48.70	49.20	49.20	49.00	49.15
20.....	48.95	49.35	51.10	53.00	50.25	48.95	48.60	48.50	49.30	48.80	49.00	49.45
21.....	48.70	49.40	50.55	52.60	50.30	47.50	48.60	48.85	49.00	49.30	49.00	49.30
22.....	49.30	49.45	50.20	52.25	50.95	48.10	48.80	48.60	48.55	48.95	49.10	49.45
23.....	48.85	49.20	50.00	51.90	51.25	48.40	48.50	48.60	49.10	49.30	49.00	49.20
24.....	49.05	49.25	50.05	52.40	51.05	48.70	47.80	48.75	49.20	49.75	48.70	49.15
25.....	49.15	48.95	49.85	52.20	51.05	48.85	47.15	48.65	48.05	51.15	49.30	48.80
26.....	49.00	49.60	49.35	51.60	50.85	48.80	47.80	48.70	49.30	50.70	49.10	49.45
27.....	48.90	49.40	49.20	51.00	50.60	48.45	47.95	48.30	48.70	50.65	48.45	49.00
28.....	48.30	49.40	49.20	51.05	50.20	48.90	48.45	49.10	48.95	50.20	48.95	49.45
29.....	49.20	49.35	50.65	51.10	50.00	48.55	48.80	48.80	48.85	49.15	48.85	49.70
30.....	48.80	......	51.20	51.10	50.75	48.50	48.80	49.10	49.20	49.40	48.75	49.50
31.....	48.70	......	51.15	......	50.80	......	48.80	48.75	......	49.45	......	49.85

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Hudson River at Toll Bridge Mechanicville, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	51.77	49.72	50.52	54.62	53.22	53.02	49.32	49.22	49.47	49.87	51.17	49.87
2.....	51.67	49.62	50.32	54.62	52.77	52.77	49.17	49.17	49.22	49.87	51.12	50.32
3.....	51.67	49.42	49.77	54.67	52.47	53.37	49.12	49.12	49.17	49.67	50.87	51.22
4.....	51.32	49.02	50.12	54.32	52.17	52.32	48.67	48.37	49.17	49.77	50.97	52.12
5.....	50.67	49.37	50.07	53.87	51.87	52.07	49.17	49.12	49.17	49.97	50.82	52.42
6.....	50.47	49.57	49.92	54.52	52.77	51.67	49.27	49.17	49.57	49.37	50.77	52.57
7.....	50.57	49.42	49.37	56.27	52.47	51.77	48.47	49.32	49.82	49.72	50.82	52.42
8.....	50.32	49.27	49.22	57.27	52.27	51.57	49.17	49.27	49.37	49.67	51.97	52.02
9.....	50.22	49.47	49.72	56.62	52.17	51.02	49.27	49.32	49.52	49.57	53.57	52.02
10.....	51.07	49.52	50.32	56.17	52.32	50.87	49.32	49.47	49.77	49.37	53.37	51.77
11.....	50.67	49.67	50.12	55.57	51.67	50.67	49.12	49.57	49.62	49.32	53.07	51.42
12.....	50.47	49.72	50.42	55.97	51.52	50.67	49.22	49.52	49.62	49.37	52.32	51.27
13.....	50.17	49.77	53.92	54.92	51.67	50.57	49.07	49.32	49.62	49.32	52.12	51.47
14.....	49.32	50.02	52.57	54.32	51.97	50.37	48.72	49.47	49.22	49.77	52.07	50.67
15.....	49.52	49.97	52.77	54.37	52.27	50.07	49.17	49.57	48.97	50.07	52.27	50.17
16.....	49.37	50.12	55.97	54.67	52.37	49.32	48.97	49.27	50.27	49.87	52.12	51.07
17.....	49.32	50.22	54.17	56.02	52.67	50.27	49.17	49.27	50.67	49.77	51.97	50.62
18.....	49.72	50.42	53.87	56.47	52.77	49.97	49.22	49.02	50.32	49.77	51.62	49.87
19.....	50.32	50.27	53.77	56.47	52.77	49.87	49.17	49.27	50.27	49.77	51.52	50.12
20.....	50.22	50.17	54.02	56.17	52.67	50.02	49.12	49.27	50.47	49.37	51.42	52.22
21.....	49.87	50.37	53.77	55.77	52.57	49.67	48.82	49.17	50.77	49.77	51.22	51.17
22.....	50.22	50.87	52.77	55.52	53.47	49.77	49.22	49.47	49.97	49.72	51.27	50.97
23.....	49.97	51.02	52.42	55.27	53.92	49.22	49.37	49.17	50.12	50.07	51.12	51.22
24.....	49.72	50.82	52.32	55.62	53.77	49.77	49.07	49.27	50.02	52.27	51.07	51.17
25.....	49.67	50.27	52.27	55.37	53.77	49.77	49.22	48.92	50.02	54.17	51.17	50.92
26.....	49.42	50.77	51.77	54.92	53.47	49.57	49.42	49.17	50.02	53.52	51.12	50.92
27.....	49.12	50.77	51.47	54.67	53.07	49.27	49.12	49.27	50.32	52.97	51.17	50.77
28.....	48.97	50.92	51.82	54.17	52.37	49.37	48.77	49.52	50.27	52.22	50.97	50.37
29.....	49.57	50.82	52.72	54.07	52.47	49.17	48.57	49.42	50.27	52.07	50.57	49.62
30.....	49.62	......	54.27	53.87	53.97	49.22	49.32	49.72	50.32	51.67	49.97	49.67
31.....	49.77	......	53.77	......	53.22	......	49.22	49.47	......	51.37	......	51.77

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Hudson River at B. & M. R. R. Bridge, Mechanicville, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	69.70	68.70	68.30	71.40	70.65	70.45	67.30	69.50	70.50	70.15	70.70	69.30
2.....	69.30	68.50	68.60	71.20	70.45	70.50	66.70	66.60	70.75	69.70	70.45	69.10
3.....	68.90	68.70	68.95	71.50	70.35	69.90	67.00	66.75	69.70	70.25	70.20	69.50
4.....	68.90	69.20	*a*	71.30	70.30	69.70	67.10	67.15	69.90	70.40	70.05	71.60
5.....	68.90	68.55	67.10	71.30	70.20	69.60	*a*	......	70.30	70.25	69.80	71.40
6.....	68.90	68.70	67.30	*a*	69.40	69.30	66.70	......	70.10	69.95	69.50	71.45
7.....	68.90	68.70	67.10	*a*	69.20	69.20	67.10	67.10	69.75	70.25	69.70	71.40
8.....	67.70	68.20	67.30	*a*	69.30	68.90	66.10	67.10	69.80	69.60	71.45	71.70
9.....	67.90	68.20	66.95	*a*	69.60	69.50	66.10	66.90	70.30	69.25	71.65	71.05
10.....	67.90	68.60	69.60	*a*	70.20	68.75	66.65	68.25	70.40	69.20	71.85	70.50
11.....	68.10	69.30	66.90	*a*	69.60	68.50	66.80	68.30	70.00	69.30	71.60	70.80
12.....	68.10	69.00	66.90	*a*	70.15	68.20	66.70	69.00	70.10	70.25	71.50	71.00
13.....	68.30	69.10	70.95	71.38	69.38	67.80	66.15	70.10	70.10	70.60	71.40	70.90
14.....	68.30	68.92	69.90	71.50	69.55	67.55	66.35	70.30	70.30	70.45	71.40	70.05
15.....	68.40	68.90	69.85	71.30	69.90	67.40	66.05	70.20	69.00	70.95	71.55	70.30
16.....	68.10	69.00	*a*	*a*	70.05	67.80	66.20	70.20	70.80	70.50	71.30	69.60
17.....	67.90	68.90	*a*	*a*	70.40	68.15	67.10	70.20	71.25	70.45	71.35	69.80
18.....	67.90	69.90	70.95	*a*	70.20	67.25	67.35	68.85	70.50	70.25	71.15	69.05
19.....	67.90	68.50	70.80	*a*	70.50	66.90	66.10	69.30	70.60	69.80	70.80	68.90
20.....	67.90	68.65	71.20	*a*	70.30	66.75	65.70	69.30	71.15	69.80	70.45	70.30
21.....	68.30	68.50	70.60	*a*	70.30	65.90	67.40	69.30	70.90	70.40	70.20	70.95
22.....	68.30	68.50	69.05	*a*	70.75	65.80	67.10	69.50	*a*	70.30	70.10	71.25
23.....	68.30	68.50	68.60	*a*	71.00	67.95	66.90	70.00	71.15	*a*	70.00	70.20
24.....	68.30	68.75	69.60	*a*	71.10	67.70	66.90	70.35	70.25	*a*	70.35	70.00
25.....	68.30	69.70	*a*	*a*	70.90	67.55	66.10	69.60	70.25	*a*	70.50	70.60
26.....	68.10	68.10	68.20	*a*	71.30	66.80	66.20	70.25	69.70	*a*	70.70	69.50
27.....	68.10	68.30	67.85	71.45	71.00	65.70	66.40	70.10	70.20	71.50	70.90	69.85
28.....	68.30	68.10	67.70	71.30	70.45	65.30	66.30	70.30	70.25	71.45	70.00	69.50
29.....	68.30	68.10	68.40	71.10	70.00	65.30	66.30	70.35	71.40	71.15	69.00	70.40
30.....	68.30	......	70.90	71.00	70.40	67.30	*a*	69.90	70.80	71.00	69.35	70.20
31.....	68.30	......	71.50	......	70.55	......	66.90	70.10	......	70.75	......	71.00

a Above limit of gage.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Hudson River below Dam at Stillwater, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	77.38	77.13	76.28	78.93	78.43	78.28	75.73	*a*	75.78	76.28	77.03	76.13
2.....	77.23	76.73	76.18	78.98	78.43	78.13	75.68	*a*	75.78	76.13	76.88	76.08
3.....	77.03	76.13	76.08	79.08	77.98	77.88	75.73	*a*	75.98	76.08	76.63	76.78
4.....	76.73	75.93	76.43	79.03	77.98	77.73	75.53	*a*	75.88	76.13	76.83	77.38
5.....	76.63	76.78	76.48	78.83	77.43	77.43	75.53	*a*	75.83	76.08	76.78	77.78
6.....	76.53	76.73	76.23	79.63	78.03	77.23	75.43	*a*	75.88	75.78	76.58	77.88
7.....	*a*	76.73	76.13	79.88	77.38	77.08	75.63	*a*	75.98	75.83	76.88	77.93
8.....	76.73	76.73	76.18	81.13	77.53	76.98	75.53	*a*	75.88	75.83	77.88	77.73
9.....	76.68	76.73	76.38	81.33	77.03	76.73	75.53	*a*	75.83	75.83	78.53	77.73
10.....	76.83	76.73	76.43	80.83	77.03	76.73	75.53	*a*	75.98	75.83	78.58	77.28
11.....	76.73	76.33	76.33	80.38	77.08	76.73	75.59	*a*	76.03	76.08	78.48	77.23
12.....	76.73	76.33	76.48	80.63	*a*	76.53	75.68	*a*	75.98	75.93	78.08	77.13
13.....	76.63	76.63	78.23	79.03	*a*	76.33	75.68	*a*	75.78	75.93	77.78	77.03
14.....	*a*	76.38	78.13	78.83	*a*	76.23	75.68	*a*	75.83	75.88	77.73	76.78
15.....	76.58	76.33	77.13	78.88	*a*	76.18	75.53	*a*	75.23	76.23	77.83	76.33
16.....	76.53	76.33	79.28	79.28	*a*	76.13	75.53	*a*	76.33	76.13	77.63	76.28
17.....	76.63	76.33	78.33	80.08	*a*	76.18	75.58	75.73	76.53	76.13	77.43	76.38
18.....	76.73	76.53	78.23	80.78	*a*	76.23	75.53	74.73	76.33	75.98	77.43	76.43
19.....	76.58	76.53	78.28	81.03	77.93	76.23	75.48	76.03	76.38	76.23	77.28	76.58
20.....	76.53	76.63	78.43	81.13	77.93	76.08	75.48	75.83	76.68	75.83	77.03	77.03
21.....	*a*	76.48	78.03	80.83	78.33	75.93	75.63	75.73	76.43	75.83	76.93	77.03
22.....	76.63	76.43	77.73	80.03	78.58	75.93	75.53	75.78	76.23	76.08	76.93	76.73
23.....	76.58	76.43	77.83	79.83	78.78	75.93	75.53	75.83	76.28	76.08	76.88	76.88
24.....	76.73	76.28	77.83	80.53	*a*	75.83	75.58	75.88	76.28	77.43	76.63	76.58
25.....	76.63	76.18	78.28	80.48	*a*	75.83	75.53	75.73	76.23	78.68	77.13	76.28
26.....	76.73	76.73	78.43	79.73	77.93	75.73	75.53	75.83	76.08	78.63	76.88	76.53
27.....	76.53	76.73	77.53	79.53	78.38	75.73	75.53	76.03	76.08	78.38	76.68	76.68
28.....	*a*	76.48	77.98	79.08	77.78	75.73	75.53	76.13	76.18	78.18	76.58	76.73
29.....	76.53	76.33	78.63	78.83	77.73	75.73	75.53	75.88	76.03	77.78	76.53	76.28
30.....	76.63	......	78.88	78.78	77.98	75.73	75.53	75.88	76.03	77.48	76.43	76.43
31.....	76.53	......	78.98	......	78.28	......	75.53	75.93	......	77.28	......	76.98

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Hudson River at Highway Bridge, Stillwater, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	85.29	84.69	84.39	86.89	86.74	86.19	84.09	*a*	83.89	84.49	85.09	84.49
2.....	85.29	84.49	84.44	87.04	86.44	86.19	84.04	*a*	83.84	84.44	85.09	84.74
3.....	84.94	84.49	84.54	86.99	86.24	85.94	84.09	*a*	83.89	84.34	84.94	85.09
4.....	84.89	84.29	84.59	86.89	85.84	85.79	83.99	*a*	83.99	84.34	85.09	85.69
5.....	84.94	84.54	84.49	86.89	85.69	85.39	83.99	*a*	83.99	84.34	84.89	85.79
6.....	85.04	84.64	84.39	87.09	85.89	85.29	83.84	*a*	83.99	83.99	84.84	85.84
7.....	*a*	84.74	84.34	87.59	85.79	85.14	84.19	*a*	84.14	84.19	84.89	85.79
8.....	84.69	84.54	84.44	88.64	85.84	84.84	83.79	*a*	84.09	83.99	85.79	85.69
9.....	84.59	84.49	84.59	88.99	85.59	84.64	83.79	*a*	83.99	83.99	86.39	85.79
10.....	84.29	84.44	84.59	88.39	85.59	84.69	83.79	*a*	84.19	84.09	86.39	85.49
11.....	84.44	84.49	84.59	87.89	85.49	84.69	83.84	*a*	83.99	84.04	86.34	85.39
12.....	84.54	84.49	84.59	87.39	*a*	84.59	84.04	*a*	83.94	84.09	86.04	85.29
13.....	84.29	84.64	85.74	87.09	*a*	84.49	84.14	*a*	83.89	84.29	85.79	85.24
14.....	*a*	84.64	85.79	86.89	*a*	84.39	84.09	*a*	83.84	84.14	85.69	84.89
15.....	84.39	84.59	85.59	86.99	*a*	84.34	83.79	*a*	83.59	84.39	85.74	84.64
16.....	84.34	84.54	86.39	87.24	*a*	84.29	83.79	*a*	84.44	84.39	85.69	84.89
17.....	84.29	84.49	86.14	87.69	*a*	84.34	84.04	83.99	84.64	84.44	85.49	84.74
18.....	84.39	84.29	86.04	88.19	*a*	84.39	83.99	83.89	84.54	84.19	85.49	84.59
19.....	84.34	84.54	86.09	88.79	85.54	84.39	83.89	84.09	84.59	84.34	85.29	84.79
20.....	84.29	84.64	86.34	88.79	85.49	84.29	83.84	83.94	84.89	84.24	85.24	85.09
21.....	*a*	84.64	85.99	88.24	86.19	84.29	84.14	83.89	84.59	84.04	85.09	85.09
22.....	84.49	84.69	85.39	87.79	86.69	84.29	83.99	83.79	84.44	84.34	85.09	85.09
23.....	84.59	84.44	85.39	87.59	86.79	84.29	83.74	83.99	84.39	84.69	85.04	85.09
24.....	84.39	84.64	85.44	87.99	*a*	84.29	83.99	83.99	84.44	85.39	85.04	85.04
25.....	84.49	84.54	85.49	87.99	*a*	84.29	83.99	83.84	84.34	86.49	85.09	84.69
26.....	84.59	84.89	85.59	87.49	86.74	84.09	83.94	83.84	84.34	86.59	85.04	84.84
27.....	84.54	84.99	85.69	87.19	86.09	84.09	84.04	84.04	84.34	86.29	84.89	84.84
28.....	*a*	84.64	85.59	87.04	85.84	83.99	84.04	83.99	84.39	86.24	84.84	84.89
29.....	84.54	84.54	86.44	86.99	85.69	83.99	83.79	84.04	84.39	85.69	84.74	84.79
30.....	84.44	......	86.79	86.99	85.84	84.09	83.79	83.94	84.44	85.49	84.59	87.74
31.....	84.34	......	86.79	......	86.19	......	83.69	83.99	......	85.34	......	85.09

a No record.

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Hudson River at Toll Bridge, Schuylerville, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	86.55	84.80	84.65	88.50	88.15	87.55	84.10	83.90	84.10	84.70	85.80	84.85
2.....	86.25	84.70	84.70	88.80	87.85	87.10	84.15	83.95	83.95	84.55	85.60	85.15
3.....	86.00	84.90	84.50	88.90	87.35	86.95	84.00	83.95	83.95	84.45	85.40	85.60
4.....	85.75	84.75	84.60	88.65	86.90	86.50	83.90	83.80	84.10	84.55	85.60	86.90
5.....	85.55	84.80	84.60	88.85	86.50	86.15	83.90	83.55	84.10	84.45	85.40	86.95
6.....	85.35	84.95	84.65	89.60	87.00	85.95	84.15	83.75	84.20	84.20	85.25	87.00
7.....	84.85	84.95	84.70	91.20	86.70	85.75	83.75	83.90	84.20	84.25	85.35	87.00
8.....	85.10	84.85	84.75	93.95	86.75	85.50	83.85	83.95	84.15	84.30	87.00	86.95
9.....	85.15	84.85	84.85	93.90	86.40	85.20	83.90	84.00	83.90	84.25	88.20	86.80
10.....	85.10	84.75	84.85	92.95	86.75	85.30	83.95	84.00	84.25	84.15	88.30	86.40
11.....	85.00	84.65	84.75	91.80	86.05	85.10	84.15	84.05	84.20	84.15	88.10	86.05
12.....	85.00	84.80	84.80	90.55	86.20	85.05	84.10	83.95	84.10	84.30	87.60	85.75
13.....	85.05	84.85	86.50	89.65	85.95	84.90	84.00	84.20	84.00	84.50	87.05	85.55
14.....	84.85	84.75	86.10	89.20	86.25	84.75	83.75	84.10	84.00	84.35	86.85	85.25
15.....	84.85	84.70	86.10	89.35	86.65	84.65	83.85	84.05	83.95	84.70	86.95	85.05
16.....	84.90	84.65	90.35	90.05	86.30	84.60	84.00	84.05	84.65	84.50	86.80	85.20
17.....	84.90	84.70	88.80	91.70	87.00	84.75	83.95	84.05	85.05	84.60	86.55	85.10
18.....	84.95	84.65	88.95	93.20	87.35	84.60	84.00	83.85	84.75	84.40	86.45	85.20
19.....	84.90	84.70	89.00	93.95	87.20	84.55	83.95	84.15	84.75	84.60	86.10	85.25
20.....	84.90	84.75	89.20	93.75	87.05	84.50	84.00	84.00	85.25	84.35	85.80	85.75
21.....	84.85	84.95	88.40	92.65	87.20	84.50	83.85	84.10	84.95	84.25	85.55	85.75
22.....	85.25	84.75	87.90	91.80	88.35	84.50	83.75	84.00	84.65	84.50	85.65	85.70
23.....	85.25	84.80	87.50	91.50	89.15	84.45	84.00	84.00	84.70	84.55	85.55	85.80
24.....	85.00	84.90	87.10	92.30	88.90	84.40	84.00	84.05	84.65	86.20	85.25	85.45
25.....	84.90	85.05	86.65	91.85	88.65	84.40	83.90	84.10	84.55	88.30	85.30	85.05
26.....	84.90	85.30	86.20	90.90	88.40	84.00	84.00	84.15	84.45	88.25	85.45	85.40
27.....	84.75	85.05	86.00	89.95	87.85	84.10	83.95	84.15	84.45	87.90	85.35	85.20
28.....	84.55	85.00	85.85	89.50	87.30	84.05	83.70	84.20	84.60	87.50	85.25	85.10
29.....	84.70	84.70	87.40	89.11	86.95	84.05	83.55	84.05	84.40	86.90	85.20	84.95
30.....	84.80	......	88.35	88.95	87.25	83.95	83.90	84.05	84.70	86.45	85.05	85.15
31.....	84.80	......	87.95	......	87.60	......	83.90	84.05	......	86.10	......	85.80

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Hudson River at Free Bridge, near Liberty Mills, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	87.17	85.62	85.12	89.72	89.32	88.72	84.37	84.62	84.02	85.12	86.67	84.92
2.....	87.22	85.62	85.42	90.02	89.07	88.32	84.42	84.62	84.27	85.02	86.52	85.32
3.....	87.07	85.67	85.72	90.22	88.52	88.07	84.22	84.62	84.87	85.02	86.37	85.62
4.....	86.82	85.92	85.92	89.82	87.67	87.52	83.82	84.02	84.92	84.87	86.02	87.27
5.....	86.57	86.27	85.57	89.92	87.32	87.22	83.62	83.97	84.42	84.82	86.12	87.87
6.....	86.42	85.87	85.47	90.57	87.12	86.87	83.62	84.32	84.57	84.77	85.52	88.42
7.....	85.92	85.62	85.32	92.32	88.02	86.42	83.82	84.52	84.62	84.82	85.62	88.32
8.....	85.72	85.62	85.32	95.72	87.77	86.42	83.87	84.37	84.67	84.72	88.37	88.07
9.....	85.42	85.52	85.37	95.07	87.32	85.87	84.12	84.62	84.72	84.67	89.32	88.02
10.....	85.42	85.47	85.42	94.12	87.12	86.07	84.47	84.62	84.72	84.77	89.37	87.92
11.....	86.07	85.12	85.67	92.87	87.12	85.92	84.82	84.62	84.62	84.67	89.17	87.32
12.....	85.87	85.87	85.67	91.87	87.12	85.82	84.62	84.82	84.87	84.72	89.17	86.92
13.....	85.42	85.87	87.02	90.82	87.02	85.62	84.47	84.97	85.02	84.82	88.92	86.87
14.....	85.42	85.62	87.22	90.62	87.12	85.47	84.02	84.82	84.82	84.82	88.02	86.37
15.....	85.62	85.62	87.22	90.52	87.42	85.12	84.42	84.72	84.02	84.87	88.37	85.52
16.....	85.82	85.52	90.37	91.12	87.52	84.72	84.67	84.62	85.17	85.02	87.92	85.42
17.....	85.92	85.72	90.22	93.07	88.17	85.17	84.62	84.82	85.52	85.12	87.72	85.17
18.....	85.92	85.92	90.42	94.22	88.42	85.07	84.62	84.42	85.37	85.07	87.62	85.67
19.....	85.92	85.92	89.87	95.17	88.62	84.97	84.62	85.07	85.42	85.12	87.42	86.07
20.....	85.72	85.62	89.92	95.12	88.47	85.02	84.42	84.87	85.32	85.02	87.12	85.77
21.....	85.72	85.62	89.82	93.92	88.37	85.02	84.02	84.77	85.62	84.72	86.92	85.97
22.....	86.37	85.62	89.62	93.17	88.82	84.97	84.07	84.42	85.52	84.27	86.32	85.97
23.....	86.12	85.62	88.62	92.92	90.12	84.67	84.22	84.32	85.62	84.62	86.72	86.02
24.....	85.82	86.17	87.62	92.92	90.32	84.57	84.32	84.62	85.57	87.42	86.42	86.42
25.....	85.72	85.97	87.37	92.82	89.97	84.82	84.42	84.62	85.02	89.37	86.57	86.52
26.....	85.72	86.12	86.72	92.02	89.32	84.57	84.32	84.82	84.87	89.62	86.37	86.32
27.....	85.72	86.27	86.72	90.97	89.07	84.62	84.32	84.72	84.92	89.32	86.12	85.82
28.....	85.77	85.97	86.62	90.37	88.62	84.62	84.02	84.72	85.02	87.82	86.12	85.62
29.....	85.97	85.12	88.12	90.32	88.32	84.62	84.42	84.62	84.72	87.47	85.92	85.62
30.....	85.52	......	89.37	89.97	88.47	84.12	84.62	84.62	85.02	86.87	85.12	85.82
31.....	85.47	......	89.27	......	88.77	......	84.62	84.67	......	86.72	......	86.57

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Hudson River above Dam at Northumberland, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	104.78	102.73	102.73	105.13	104.63	105.33	103.63	102.23	103.73	102.73	104.38	104.58
2.....	104.58	103.53	102.88	105.18	104.43	105.58	103.43	102.38	103.23	102.53	104.13	104.38
3.....	104.63	103.48	103.88	105.18	104.28	105.38	103.73	102.13	102.38	102.43	104.78	104.43
4.....	104.38	104.38	103.23	105.08	103.78	104.88	104.28	103.73	102.58	102.63	104.63	105.18
5.....	104.28	104.13	102.93	105.28	104.08	104.48	103.88	102.63	102.88	102.68	104.13	105.48
6.....	103.93	102.83	102.98	105.38	103.73	104.53	103.33	102.28	102.58	103.63	104.28	105.58
7.....	104.58	102.88	102.88	106.78	103.13	104.38	103.93	102.18	103.18	103.03	103.73	105.38
8.....	104.58	102.88	102.78	107.48	103.78	104.13	103.28	102.38	103.58	102.48	104.83	105.58
9.....	104.18	102.78	102.93	107.48	103.93	104.08	102.63	102.23	103.13	102.48	105.38	105.38
10.....	103.58	102.83	102.98	107.08	103.93	103.93	102.53	102.48	102.38	102.38	106.38	105.48
11.....	103.88	104.08	103.43	106.48	103.98	103.43	102.73	103.88	102.28	102.43	105.83	105.28
12.....	103.43	103.73	102.73	106.03	104.38	103.38	102.63	103.68	102.28	102.38	106.03	104.93
13.....	103.28	102.83	103.63	105.58	104.68	103.48	102.33	103.28	102.28	103.78	105.43	104.43
14.....	103.38	102.98	103.78	105.43	105.08	103.63	103.38	102.38	102.33	103.13	105.13	104.18
15.....	103.23	102.93	103.48	105.38	104.83	103.33	102.93	102.28	103.88	102.98	105.38	104.48
16.....	103.13	102.78	104.78	105.78	104.93	103.68	102.78	102.33	103.68	102.78	105.23	104.33
17.....	102.98	102.43	104.88	105.98	105.18	103.33	102.48	102.28	102.78	103.08	105.88	104.28
18.....	103.48	103.73	105.08	106.28	105.33	103.28	102.33	103.88	102.78	103.88	105.63	104.18
19.....	103.03	103.08	105.08	107.58	105.78	103.13	102.38	103.93	104.13	103.58	104.88	104.48
20.....	103.18	103.18	105.08	107.54	105.73	103.28	102.38	102.53	103.93	104.08	104.58	104.08
21.....	104.38	103.08	104.43	107.38	105.33	103.13	103.78	102.28	103.58	103.38	104.48	104.08
22.....	104.18	102.88	104.13	106.98	105.78	103.33	103.13	102.38	104.58	102.68	104.38	104.58
23.....	103.48	103.18	103.98	106.53	105.53	103.73	102.43	102.63	104.28	103.28	104.33	104.48
24.....	103.88	102.98	104.73	106.63	105.38	103.48	102.43	102.98	103.58	104.13	104.98	104.43
25.....	103.28	103.78	104.48	106.53	105.63	102.68	102.58	103.78	103.13	104.38	104.58	104.28
26.....	103.13	103.73	103.78	106.23	106.28	102.73	102.38	103.58	102.58	105.18	104.38	104.43
27.....	102.78	102.83	103.38	106.03	106.18	102.53	102.28	102.48	102.53	105.28	104.48	104.18
28.....	103.98	102.83	103.58	105.48	105.48	102.53	103.18	102.33	103.38	105.43	104.28	104.13
29.....	103.48	102.88	104.08	105.38	105.28	102.38	102.38	102.48	104.13	105.18	104.38	104.53
30.....	102.93	......	104.63	105.33	105.13	103.63	102.33	102.53	103.63	104.93	103.83	104.43
31.....	102.48	......	104.88	......	104.93	......	102.38	102.28	......	104.68	......	104.13

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Hudson River below Dam at Fort Miller, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	104.95	102.90	102.75	106.25	105.55	106.00	103.80	102.85	104.05	103.40	104.80	104.75
2.....	104.90	103.15	103.10	106.40	105.40	105.95	103.95	103.00	103.40	103.00	104.65	104.60
3.....	104.70	103.75	103.20	106.15	104.80	105.65	104.00	102.85	103.30	102.95	105.00	104.60
4.....	104.70	103.60	103.30	105.85	104.70	105.20	104.10	103.75	102.95	103.25	104.80	105.75
5.....	104.55	104.35	102.75	105.80	104.55	105.00	104.10	102.80	103.30	103.20	104.60	105.95
6.....	104.55	103.15	102.95	106.25	104.75	104.85	103.60	102.70	102.85	104.30	104.60	105.95
7.....	104.10	103.20	102.85	107.80	104.55	104.60	102.95	102.90	103.50	103.40	104.45	105.90
8.....	104.50	102.80	102.90	109.30	104.70	104.50	103.00	103.05	104.25	102.45	105.80	106.15
9.....	103.90	103.10	102.95	109.15	104.20	104.80	102.50	103.10	102.95	102.45	106.65	105.75
10.....	104.05	103.00	103.30	108.65	104.45	104.20	102.65	103.05	103.10	102.80	106.95	105.45
11.....	104.05	103.25	103.00	107.75	104.00	103.70	102.95	104.25	102.95	102.65	106.70	105.30
12.....	104.00	103.80	102.45	106.95	104.80	103.70	102.50	103.95	102.80	102.80	106.25	105.15
13.....	103.95	103.25	103.65	106.40	104.90	103.55	102.85	103.40	102.80	104.40	105.85	105.00
14.....	103.65	103.00	103.30	106.35	105.30	103.50	104.00	102.75	102.75	103.55	105.65	104.60
15.....	103.25	102.90	103.35	106.25	105.60	103.35	103.40	102.75	103.95	103.35	105.75	104.80
16.....	103.20	102.60	105.10	106.75	105.25	104.20	102.80	102.95	104.15	103.90	105.60	104.75
17.....	103.30	102.85	105.50	108.20	105.75	103.90	102.70	102.70	103.35	103.65	105.80	104.60
18.....	103.45	102.85	105.50	109.15	106.15	103.00	102.85	104.05	103.15	104.60	105.55	104.40
19.....	103.05	102.95	105.55	109.65	106.15	103.25	103.15	103.90	104.05	103.80	105.15	104.55
20.....	103.25	102.60	105.60	109.50	106.05	103.35	103.00	102.85	104.15	104.35	105.00	104.70
21.....	104.25	103.05	105.15	108.80	106.05	103.15	103.80	102.75	103.75	103.20	104.85	104.75
22.....	104.40	102.80	104.70	108.05	106.90	103.35	102.95	102.60	104.40	103.15	104.90	105.45
23.....	103.60	102.80	104.55	107.90	107.35	104.40	102.90	103.15	103.95	103.20	104.70	105.20
24.....	103.40	103.20	104.75	108.40	107.20	103.80	102.75	103.00	103.60	104.60	104.90	104.60
25.....	103.75	103.80	104.35	108.10	107.05	103.25	103.15	104.10	103.30	106.20	104.95	104.50
26.....	103.30	104.00	104.10	107.55	106.70	102.70	103.15	103.55	102.90	106.50	104.75	104.55
27.....	103.00	103.20	103.80	106.70	106.35	102.45	103.10	102.65	103.20	106.55	104.55	104.35
28.....	103.30	103.30	103.80	106.60	106.05	102.80	103.15	103.00	103.70	106.05	104.55	104.45
29.....	103.60	103.05	104.65	106.35	105.65	102.70	103.05	102.40	104.25	105.55	104.50	104.85
30.....	103.05	......	105.60	106.05	105.80	104.15	103.00	103.25	103.85	105.30	104.30	104.50
31.....	102.90	......	105.65	......	106.05	......	103.15	103.15	......	104.95	......	104.65

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Hudson River above Dam at Fort Miller, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	116.60	115.40	115.35	117.40	117.35	117.10	114.65	115.40	115.45	115.45	116.15	116.05
2.....	116.60	115.30	115.40	117.45	117.35	117.05	115.05	115.45	114.50	115.55	116.05	115.75
3.....	116.55	115.50	115.75	117.40	116.80	116.80	114.90	115.50	115.35	115.50	116.55	116.15
4.....	116.45	115.70	115.45	117.40	116.65	116.65	114.95	115.60	115.05	115.55	116.20	116.95
5.....	116.40	115.65	115.30	117.45	116.65	116.35	115.05	115.30	115.15	115.40	116.05	117.00
6.....	116.05	115.50	115.20	117.80	116.85	116.25	115.00	115.40	115.00	115.55	116.00	116.90
7.....	115.70	115.60	115.25	118.75	116.70	116.20	115.15	115.10	115.35	115.00	115.85	116.90
8.....	115.95	115.35	115.40	119.40	116.90	116.05	114.35	114.90	115.45	114.90	117.05	117.25
9.....	115.70	115.45	115.30	119.30	116.60	116.25	114.70	115.05	114.50	114.95	117.55	116.85
10.....	116.05	115.45	116.05	119.10	116.70	115.65	114.90	115.10	115.00	115.15	117.75	116.60
11.....	115.90	115.45	115.40	118.60	116.40	115.65	115.00	115.55	115.45	115.10	117.45	116.40
12.....	116.10	115.55	115.20	118.20	116.75	115.60	114.95	115.30	115.00	115.20	117.25	116.25
13.....	115.60	115.30	115.85	117.85	116.25	115.60	114.90	115.30	115.00	115.65	117.10	116.35
14.....	115.45	115.30	116.00	117.80	116.65	115.30	115.20	115.35	114.90	115.15	116.90	116.05
15.....	115.20	115.25	116.10	117.70	116.75	115.25	114.65	115.18	115.55	115.55	116.95	116.25
16.....	115.35	115.30	116.25	118.15	116.65	115.85	114.65	115.25	115.45	115.45	116.90	115.90
17.....	115.20	115.30	116.60	118.75	117.00	115.45	114.75	115.05	115.30	115.45	117.05	115.85
18.....	115.35	115.75	116.70	119.20	117.15	115.35	114.85	115.55	115.35	115.50	116.65	115.65
19.....	115.40	115.35	116.75	119.40	117.05	115.30	115.10	115.35	115.40	115.40	116.50	115.95
20.....	115.35	115.00	117.10	119.40	117.00	115.25	115.10	114.95	115.70	115.60	116.40	116.15
21.....	116.00	115.40	117.05	119.10	117.25	115.30	115.25	115.00	115.65	114.70	116.30	116.35
22.....	115.90	115.20	116.80	118.65	117.70	115.20	115.30	114.65	115.70	115.20	116.25	116.55
23.....	115.65	115.35	116.65	118.55	117.95	115.35	115.45	115.25	115.55	115.25	116.20	116.35
24.....	115.45	115.45	116.75	118.85	117.80	115.10	115.40	115.15	115.50	115.85	116.45	116.15
25.....	115.50	115.70	116.35	118.65	117.75	115.30	115.55	115.35	115.40	117.10	116.20	116.15
26.....	115.50	115.60	116.55	118.40	117.55	114.40	115.55	114.75	115.45	117.40	116.20	116.05
27.....	115.35	115.40	116.20	118.00	117.25	114.55	115.65	115.05	115.55	117.45	115.95	116.15
28.....	115.70	115.50	116.05	118.15	117.10	114.65	115.90	115.30	115.60	117.05	116.05	116.15
29.....	115.65	115.25	116.55	117.85	117.10	114.85	115.35	115.45	115.75	116.75	116.05	116.30
30.....	115.30	......	117.05	117.75	117.05	115.25	115.60	115.30	115.50	116.55	115.85	115.95
31.....	115.45	......	117.05	......	117.15	......	115.55	115.40	......	116.30	......	115.85

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Hudson River above Crocker's Reef Dam.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	120.71	119.86	119.96	121.86	121.71	121.51	119.46	119.51	119.56	119.91	120.46	119.96
2.....	120.66	119.96	119.91	121.86	121.61	121.46	119.46	119.66	119.56	119.86	120.46	120.16
3.....	120.51	120.01	119.46	121.81	121.36	121.16	119.36	119.66	119.81	119.76	120.21	120.46
4.....	120.41	119.56	119.91	121.66	121.51	120.96	119.36	119.51	119.71	119.86	120.51	121.26
5.....	120.36	120.11	119.81	121.81	121.06	120.76	119.46	119.46	119.91	119.86	120.41	121.31
6.....	120.16	119.81	119.86	122.31	121.16	120.61	119.61	119.56	119.71	119.61	120.36	121.41
7.....	119.81	119.96	119.81	122.96	121.21	120.46	119.31	119.66	119.91	119.51	120.36	121.26
8.....	120.16	119.86	119.71	124.11	121.31	120.41	119.51	119.61	119.96	119.66	121.26	121.21
9.....	120.01	119.86	119.71	123.91	121.06	120.16	119.56	119.71	119.66	119.66	121.71	121.01
10.....	119.96	119.76	119.66	123.61	121.26	120.26	119.46	119.76	119.76	119.76	121.96	120.86
11.....	120.01	119.46	120.01	123.01	120.81	120.16	119.66	119.71	119.86	119.81	121.76	120.81
12.....	120.01	119.96	119.71	122.61	120.86	120.16	119.66	119.71	119.71	119.81	121.61	120.56
13.....	119.86	119.81	119.96	122.26	120.61	120.16	119.66	119.66	119.66	119.71	121.31	120.56
14.....	119.56	119.86	120.01	122.06	120.96	120.06	119.46	119.81	119.71	119.76	121.21	120.31
15.....	119.76	119.61	120.01	122.11	121.11	120.01	119.56	119.76	119.51	119.76	121.21	120.16
16.....	119.81	119.86	120.81	122.51	120.91	119.71	119.66	119.81	120.01	119.76	121.11	120.41
17.....	119.81	119.81	120.81	123.41	121.36	119.96	119.56	119.81	119.71	119.96	120.96	120.46
18.....	119.76	119.36	121.11	124.06	121.46	119.91	119.66	119.66	119.81	119.96	120.91	120.11
19.....	119.81	119.91	121.36	124.31	121.36	119.86	119.66	119.81	119.91	119.96	120.76	120.31
20.....	119.96	119.76	121.46	124.16	121.36	119.86	119.66	119.71	119.96	119.91	120.66	120.41
21.....	119.81	119.76	121.11	123.66	121.51	119.76	119.46	119.71	119.96	119.56	120.61	120.66
22.....	120.11	119.66	120.91	123.16	122.21	119.86	119.46	119.66	119.61	119.96	120.51	120.51
23.....	119.96	119.76	120.91	123.16	122.36	119.81	119.66	119.71	119.81	120.01	120.41	120.56
24.....	119.91	119.86	120.76	123.51	122.21	119.76	119.66	119.81	119.81	120.56	120.21	120.46
25.....	119.91	119.56	120.71	123.26	122.11	119.66	119.66	119.56	119.71	121.31	120.41	120.06
26.....	119.91	119.96	120.51	122.81	121.81	119.76	119.66	119.81	119.81	121.51	120.51	120.36
27.....	119.76	119.86	120.51	122.41	121.66	119.56	119.66	119.81	120.01	121.51	120.26	120.26
28.....	119.56	119.96	120.46	122.26	121.46	119.56	119.41	119.76	119.96	121.41	120.26	120.06
29.....	119.76	119.66	120.81	122.26	121.31	119.66	119.46	119.71	119.76	121.06	120.11	119.76
30.....	119.71	......	121.41	122.06	121.36	119.66	119.51	119.71	120.06	120.81	120.01	120.21
31.....	119.91	......	121.36	......	121.56	......	119.61	119.86	......	120.61	......	120.26

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Hudson River at Bridge St., Fort Edward, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	121.37	119.67	119.67	123.52	123.22	121.87	119.57	119.67	119.67	120.17	119.97	121.42
2.....	121.22	119.42	119.77	123.52	122.67	121.77	119.47	119.67	119.87	120.27	119.87	121.67
3.....	120.87	119.37	119.77	123.37	122.62	122.07	119.67	119.67	119.87	119.97	120.17	121.77
4.....	120.87	119.37	119.87	123.37	120.67	121.87	119.67	119.47	119.67	119.87	120.17	122.07
5.....	120.57	119.37	119.87	123.77	120.37	121.57	119.67	119.77	119.67	119.77	120.07	122.32
6.....	120.37	119.37	120.07	124.37	120.17	121.37	119.87	119.87	119.67	119.47	120.27	122.07
7.....	120.37	119.37	120.07	126.17	120.07	120.97	119.57	119.67	119.57	119.67	120.57	121.77
8.....	120.37	119.47	120.27	128.37	120.32	120.97	119.87	119.67	119.77	119.67	121.47	121.67
9.....	119.97	119.47	120.17	128.22	120.42	121.17	119.87	119.67	119.87	119.87	123.47	121.67
10.....	119.87	119.47	119.97	127.27	120.27	120.87	119.87	119.67	119.87	119.87	123.67	121.52
11.....	119.87	119.47	120.17	126.12	120.32	120.67	119.67	119.87	119.87	119.97	123.42	120.77
12.....	119.87	119.37	120.42	125.12	120.37	120.22	119.67	120.07	119.87	119.87	122.77	120.87
13.....	119.87	119.37	120.87	124.52	120.52	119.97	119.67	119.87	119.87	119.87	121.87	120.77
14.....	119.57	119.37	120.32	123.77	121.07	119.87	119.42	119.87	119.87	120.07	121.87	120.67
15.....	119.87	119.37	121.32	124.52	121.37	119.87	119.67	119.67	119.47	120.17	121.52	120.47
16.....	119.87	119.42	121.87	125.22	122.47	119.77	119.77	119.42	119.77	120.27	121.22	120.67
17.....	120.17	119.37	122.77	127.12	123.07	119.67	119.87	119.47	120.07	119.97	120.77	120.87
18.....	119.97	119.37	122.37	128.27	123.67	119.87	119.87	119.57	120.07	120.17	120.67	120.87
19.....	119.87	119.57	121.87	128.77	123.87	119.87	119.87	119.87	120.07	120.37	120.47	120.87
20.....	119.87	119.67	121.57	128.32	124.17	119.97	119.87	120.17	119.77	120.32	120.67	120.87
21.....	119.47	119.67	122.17	127.77	124.62	119.87	119.52	120.27	119.97	120.27	120.67	120.87
22.....	119.67	119.67	122.27	127.67	124.97	119.67	119.57	119.97	119.67	120.27	120.87	120.67
23.....	119.67	119.67	122.67	127.37	124.62	119.47	119.87	119.87	119.87	120.47	120.87	120.87
24.....	119.47	119.57	122.27	126.87	124.12	119.67	119.87	119.67	120.07	121.12	120.57	120.57
25.....	119.87	119.42	121.87	126.77	123.67	119.87	119.87	119.42	120.27	122.37	120.77	120.57
26.....	119.87	119.37	121.67	126.17	123.37	119.87	119.87	119.47	120.17	122.87	120.87	120.87
27.....	119.87	119.42	121.37	125.02	123.17	119.87	119.87	119.47	120.07	122.67	120.87	120.87
28.....	119.57	119.67	120.97	124.77	123.17	119.87	119.67	119.87	119.97	121.87	120.77	120.87
29.....	119.47	119.47	121.17	124.87	122.87	119.67	119.47	119.97	120.17	121.42	120.47	120.57
30.....	119.67	......	122.77	124.12	122.87	119.67	119.67	119.87	120.27	121.07	120.37	120.37
31.....	119.67	......	122.97	......	122.87	......	119.87	119.87	......	121.07	......	120.37

Mean Daily Elevation of Water-surface (Barge Canal Datum) of Hudson River above Feeder Dam at Glens Falls, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	283.12	281.72	281.77	283.92	283.82	283.32	281.97	281.32	281.52	282.42	282.72	282.27
2.....	283.12	281.82	281.67	284.12	283.92	283.17	281.82	281.32	281.82	282.27	282.72	282.22
3.....	282.87	281.77	281.72	284.02	283.22	282.92	281.62	281.52	282.12	282.32	282.92	282.97
4.....	282.82	281.82	281.87	283.92	283.12	282.72	281.57	280.77	282.17	282.27	282.72	283.47
5.....	282.72	282.12	281.82	284.07	283.17	282.67	281.97	281.07	282.07	282.27	282.67	283.42
6.....	282.72	282.02	281.77	284.47	282.92	282.47	281.67	282.07	282.27	282.07	282.47	283.32
7.....	282.32	281.92	281.77	285.32	283.07	282.37	281.22	281.77	282.27	281.82	282.47	283.42
8.....	282.52	281.92	281.22	286.37	283.02	282.17	281.47	281.87	281.52	281.67	283.72	283.52
9.....	282.47	281.87	281.92	286.37	282.92	282.17	281.82	282.02	282.47	281.67	284.27	283.37
10.....	282.57	281.77	281.47	285.97	282.97	282.02	281.97	282.22	282.07	281.62	284.42	283.15
11.....	282.52	281.62	281.82	285.32	282.72	281.97	281.82	281.82	282.02	281.72	284.02	283.07
12.....	282.52	281.97	281.67	284.87	282.77	281.92	281.52	282.42	281.82	282.27	283.82	283.02
13.....	282.12	281.77	281.77	284.47	282.72	281.87	281.07	281.97	281.87	281.62	283.52	282.72
14.....	282.47	281.72	281.62	284.37	282.92	281.82	281.27	282.07	281.77	282.62	283.37	282.42
15.....	281.97	281.72	281.82	284.42	283.12	281.72	281.57	281.92	281.27	282.37	283.47	282.42
16.....	282.07	281.72	282.07	284.92	282.97	281.62	281.47	281.97	282.22	282.62	283.42	282.47
17.....	281.87	281.87	282.67	285.97	283.22	281.57	281.62	282.12	282.27	282.47	283.32	282.22
18.....	281.82	281.67	282.82	286.52	283.47	281.52	281.72	281.77	282.37	282.42	283.12	282.17
19.....	282.02	281.87	283.02	286.72	283.42	281.57	281.87	282.07	282.42	282.37	283.02	282.17
20.....	282.17	281.77	283.22	286.52	283.27	281.52	281.57	281.92	282.47	281.32	282.92	282.47
21.....	282.12	281.77	283.27	286.02	283.42	281.52	281.12	281.87	282.57	287.32	282.82	282.57
22.....	282.27	281.72	282.97	285.52	284.22	281.47	281.97	281.97	282.42	282.07	282.72	282.42
23.....	282.27	281.87	282.92	285.67	284.47	281.27	281.77	282.07	282.52	282.07	282.62	282.32
24.....	282.02	281.87	282.87	285.82	284.22	281.52	281.87	282.02	282.42	282.72	282.62	282.12
25.....	281.92	281.52	282.72	285.67	284.22	281.17	281.97	281.72	282.07	283.87	282.67	281.87
26.....	281.97	282.12	282.52	285.22	283.97	281.27	282.02	282.07	281.97	284.02	282.62	281.97
27.....	281.77	281.87	282.52	284.62	283.62	281.52	281.67	282.32	282.72	283.97	282.52	281.92
28.....	281.67	281.87	282.42	284.47	283.27	281.92	280.82	282.02	282.67	283.57	282.42	281.82
29.....	281.92	281.67	282.57	284.47	283.07	282.27	281.32	282.12	282.62	283.37	282.32	281.57
30.....	281.82	......	283.27	284.12	283.17	282.07	281.42	282.22	282.67	283.12	282.17	281.67
31.....	281.87	......	283.37	......	283.42	......	281.42	282.17	......	282.97	......	282.12

RECORDS OF DISCHARGE, UPPER HUDSON RIVER AND TRIBUTARIES.

In the following pages will be found tables giving the daily discharge and monthly run-off of the upper Hudson river and its tributaries at a considerable number of locations. These records are derived from various sources. Several important records, including two records of Hudson river at Mechanicville, are maintained and furnished by private corporations. Other records are maintained by this Department and others by the State Conservation Commission and the United States Geological Survey. Some of these are maintained in coöperation with private corporations. Some of the records are at dams and mills and others are at current-meter stations. At some, the conditions are known to be good; at others they are poor at certain seasons of the year. Some of these records are of long duration, notably the record at Mechanicville, established in December, 1888, and the record at Fort Edward, established in December, 1895. Most of the records are, however, of much shorter duration and it is only within the past two or three years that a sufficient number of gaging stations has been maintained in this basin to enable reliable comparisons of the different records to be made. The results of gagings at many of these stations have been available for only one or two years. A study of the results has been undertaken, with a view to determining the relative accuracy of the different records, but it has not been carried far enough at this time to enable final conclusions to be drawn. It appears quite certain, however, that the record of the West Virginia Pulp & Paper Company's dam in Mechanicville is substantially accurate in its present form, although this record in earlier years was probably somewhat in error in regard to high-water conditions, owing to the use of a less reliable formula for discharge over the dam than that at present applied. It also appears that the record at Crocker's Reef dam, maintained by this Department, beginning in 1907, is probably very reliable, as the conditions are exceptionally good. It has been known for several years that the calculated discharge at Fort Edward was probably somewhat in error, especially during the low-water season. In view of the fact that no reliable basis existed for determining the correct discharge and making the necessary modifications in this record, it has seemed best to continue the computation of the record in the same manner pursued from its inception. In applying the Fort Edward data it should be understood that the low-water flow as recorded is probably somewhat excessive throughout the entire record.

As to other records of the Hudson river and tributaries it can only be said at this time that they are probably more consistent than would appear from a direct comparison. In some cases where the recorded run-off per square mile at adjacent stations differs, it does not necessarily follow that either one of the records is incorrect. There are wide variations in the hydrological conditions in different portions of the upper Hudson drainage basin. For example, the topography, culture, geology and soil for the Hudson and its tributaries above North Creek are all essentially different from the corresponding features of the drainage basin of Saratoga lake outlet. The hydrological features of both the above mentioned basins are essentially different from the corresponding features of the drainage basins of the Battenkill and Hoosic streams. The conditions are somewhat further complicated by diversion from the Hudson river to supply the Champlain canal through Glens Falls feeder and at Northumberland dam.

HUDSON RIVER ABOVE DAM OF ADIRONDACK ELECTRIC POWER CORPORATION, NEAR MECHANICVILLE, N. Y.

This gage was established August 18, 1905, by this Department. The gage is a vertical staff divided to feet and tenths and reading from zero to 16 feet. It is attached to the upstream face of the river wall at the right-hand end of the line of wastegates forming a continuation of the dam. Readings are taken at 8 A. M. and 5 P. M. by H. C. Tinker. The gage zero is at elevation 43.00. A record is kept in the adjoining power-plant, showing the use of water by the turbine wheels, and also the waste over the dam, through gates, etc.

The accompanying tables show the discharge as calculated at the power plant. The dam is of the ogee type, but the discharge is calculated by the East Indian Engineers' formula for dams with broad crest.

The record of the flow of Hudson river at this plant was begun October 1, 1897.

Acknowledgment is made to the Adirondack Electric Power Corporation for furnishing copies of this record for the earlier years during which it was kept.

Mean Daily Discharge, Second-feet, of Hudson River at Dam of Adirondack Electric Power Corporation, near Mechanicville, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	10,483	4,403	3,720	20,121	18,683	15,936	2,021	1,571	*1,131	3,828	8,312	*4,266
2	9,413	3,788	4,491	22,318	17,023	*12,910	2,352	1,484	1,350	3,438	7,977	6,033
3	8,297	4,551	*2,770	21,937	15,322	14,350	1,642	1,588	1,647	3,040	*6,413	8,045
4	5,604	*3,010	3,887	19,484	13,967	12,247	1,218	*1,124	1,955	2,925	8,402	13,098
5	6,527	4,514	3,734	20,208	*9,791	10,549	1,239	1,118	2,379	3,054	7,411	13,463
6	5,235	4,961	2,885	23,740	13,004	9,215	2,374	1,567	2,917	*1,630	6,934	14,551
7	*4,162	4,464	2,877	*27,880	11,883	8,127	*1,108	1,573	2,497	2,901	6,752	14,641
8	5,558	4,280	3,028	40,470	12,695	9,007	1,519	1,865	*2,203	3,175	14,675	*13,540
9	5,492	3,714	4,169	35,970	10,636	*6,261	2,544	1,673	1,945	2,376	18,065	13,870
10	5,332	3,586	*3,669	32,973	11,774	6,752	2,059	1,693	3,207	2,238	*19,244	11,975
11	4,681	*2,585	4,050	27,635	9,756	6,026	1,947	*1,480	2,196	2,129	17,912	11,022
12	5,297	2,960	4,628	21,132	*9,193	5,386	2,074	1,733	2,083	2,836	15,883	9,843
13	5,584	3,984	17,175	20,528	9,598	5,046	1,741	2,586	2,184	*1,584	14,675	8,676
14	*4,081	3,252	11,572	*20,528	10,109	4,958	*1,173	2,017	1,164	2,582	13,749	6,380
15	4,393	3,189	11,323	21,680	11,596	4,886	1,874	1,779	*1,534	2,830	14,505	*4,963
16	4,026	3,028	27,323	24,365	11,164	*3,034	2,160	2,082	3,980	2,800	14,254	6,486
17	4,146	2,860	*16,926	30,313	14,139	4,968	1,694	2,041	5,285	4,043	*11,966	5,563
18	3,457	*2,757	17,577	34,006	13,749	4,176	1,806	*1,220	4,185	3,554	12,838	5,446
19	4,650	3,136	17,257	36,048	*12,998	4,696	1,850	1,653	5,021	3,964	11,371	6,474
20	4,994	3,798	18,640	36,020	13,143	3,891	1,265	1,950	5,227	*2,592	9,695	8,074
21	*3,807	4,665	14,648	*34,310	13,479	4,104	*1,506	1,682	5,134	3,538	8,790	8,445
22	6,110	3,917	12,550	29,489	17,207	3,375	1,813	1,878	*3,619	3,518	8,333	*5,988
23	5,286	4,156	11,089	27,120	19,621	*2,511	2,460	2,086	4,447	7,429	7,661	8,092
24	5,630	5,466	*10,220	30,376	17,998	3,617	2,490	2,158	4,223	11,704	*5,400	6,700
25	4,843	*4,081	10,357	29,489	18,240	4,140	1,877	*1,359	3,522	20,601	8,410	4,808
26	5,134	5,384	8,233	24,819	*15,873	2,778	2,742	1,151	2,689	19,348	8,328	6,354
27	4,744	7,191	7,975	20,511	15,277	2,226	2,124	2,531	3,207	*16,256	7,683	5,758
28	*2,789	4,610	7,976	*20,474	12,844	2,603	*1,213	2,212	4,043	16,109	6,532	4,838
29	4,519	4,547	15,980	21,284	11,705	2,227	1,133	1,570	*3,029	12,636	6,318	*3,422
30	4,989	......	19,358	20,754	15,054	*1,955	1,363	1,893	4,515	12,047	6,087	5,845
31	3,787	......	*17,661	......	16,596	......	1,581	1,738	......	11,303	......	10,400
Mean	5,260	4,029	10,250	26,533	13,681	6,065	1,806	1,744	3,101	6,194	10,486	8,292

* Sunday.

Monthly Discharge of Hudson River at Dam of Adirondack Electric Power Corporation, near Mechanicville, N. Y.

[Drainage area, 4,570 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1912.					
January	10,483	2,789	5,260	1.15	1.33
February	7,191	2,585	4,029	0.882	0.951
March	27,323	2,770	10,250	2.24	2.58
April	40,470	19,484	26,533	5.81	6.48
May	19,621	9,193	13,681	2.99	3.45
June	15,936	1,955	6,065	1.33	1.48
July	2,742	1,108	1,806	0.395	0.455
August	2,586	1,118	1,744	0.382	0.44
September	5,285	1,131	3,101	0.679	0.758
October	20,601	1,630	6,194	1.36	1.57
November	19,244	5,400	10,486	2.29	2.56
December	14,641	3,422	8,292	1.81	2.09

HUDSON RIVER AT WEST VIRGINIA PULP AND PAPER CO.'S MILL, MECHANICVILLE, N. Y.

A record of the flow of Hudson river at Mechanicville has been kept at the Duncan dam since December, 1888. The record includes two daily readings of the depth on the crest of the dam, and a continuous record of the run of the water-wheels in the adjoining paper-mill. The accompanying tables, computed by Mr. R. P. Bloss, the engineer of the West Virginia Pulp and Paper Company, show the daily and monthly mean flow at Mechanicville.

The dam at Mechanicville was raised during 1904, a concrete crest and apron being added, so that the dam has now a rounded, or ogee cross-section. A discharge curve has been calculated, using coëfficients of discharge derived from United States Geological Survey experiments on models of dams of ogee cross-section.

Water carried in Champlain canal, which parallels Hudson river from Fort Edward to Albany, is not included in the estimated discharge.

Mean Daily Discharge, Second-feet, of Hudson River at West Virginia Pulp and Paper Co.'s Mill. Mechanicville, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	9,078	4,205	3,308	21,856	16,338	14,992	2,463	1,168	*997	3,074	9,357	*2,861
2	8,404	4,205	3,706	22,571	15,408	*13,171	1,665	1,102	1,420	2,948	8,519	7,315
3	7,579	3,901	*5,157	22,564	13,230	15,567	1,177	1,144	1,178	2,307	*6,889	8,285
4	6,186	*1,268	2,250	20,260	12,384	11,344	760	*960	1,239	2,452	9,284	10,327
5	5,927	3,039	3,483	19,403	*9,312	9,652	931	1,124	1,092	3,141	6,909	10,911
6	4,177	3,450	3,080	24,396	12,876	6,962	1,557	978	1,754	*1,536	7,231	11,033
7	*3,880	3,990	2,318	*30,250	10,983	8,479	*1,016	1,420	1,414	2,474	7,445	11,434
8	5,390	3,351	2,323	47,275	12,243	7,544	1,825	925	*	2,369	21,688	*8,247
9	4,771	3,397	3,905	41,415	9,773	*6,289	1,359	1,082	2,040	1,801	20,173	11,111
10	4,362	3,166	*6,327	35,752	11,424	6,339	1,412	1,398	2,355	3,818	*17,685	11,556
11	4,921	*3,929	3,742	30,701	8,674	5,141	1,695	*834	1,539	1,667	17,625	11,405
12	4,971	2,138	3,783	25,713	*9,354	4,903	1,440	1,337	1,509	2,533	15,374	11,183
13	4,072	3,655	15,944	22,559	9,121	4,753	1,369	2,030	1,216	*2,630	13,268	9,052
14	*5,178	3,357	10,493	*21,900	9,459	4,586	*687	1,431	1,296	2,843	10,776	8,873
15	3,978	2,626	9,334	21,780	11,178	4,026	827	1,399	*849	3,490	10,968	*6,073
16	3,590	2,542	28,889	24,020	10,538	*3,189	2,173	1,411	3,203	3,078	13,683	8,472
17	3,965	2,500	*17,200	31,082	11,956	4,445	1,350	1,407	4,329	3,233	*12,627	6,894
18	2,513	*600	16,991	34,767	12,586	3,383	1,265	*677	3,503	....	12,627	6,164
19	3,243	1,491	16,608	37,401	*12,482	3,212	1,305	1,381	3,784	3,078	9,931	7,254
20	4,069	3,306	12,455	36,943	12,612	4,077	1,723	1,961	3,936	*748	9,254	8,057
21	*5,725	4,606	15,325	*31,820	12,596	3,425	*1,005	1,403	4,239	2,831	9,296	9,398
22	5,975	3,534	12,804	28,581	17,343	2,707	1,209	1,323	*3,455	3,066	9,009	*8,367
23	4,445	2,786	11,067	25,246	19,915	*2,729	1,154	1,188	4,266	3,230	8,878	9,655
24	4,116	4,378	*9,584	31,340	18,484	2,442	1,136	1,607	3,726	27,618	*6,617	11,213
25	3,955	*4,400	10,564	29,936	17,325	3,270	1,180	*810	3,443	19,496	9,771	6,942
26	3,931	4,842	8,222	26,071	*15,576	2,152	1,188	1,285	2,416	32,235	9,067	7,366
27	3,297	5,420	7,370	21,825	14,645	1,734	1,173	1,636	2,515	*25,599	9,696	6,453
28	*5,264	4,412	7,445	*20,800	11,974	1,729	*906	1,211	3,453	15,039	7,107	5,362
29	3,447	4,010	16,532	20,683	9,852	1,612	1,291	1,172	*3,026	12,402	6,704	*7,132
30	4,228	......	22,017	20,044	14,475	*2,300	1,172	1,291	4,190	10,646	6,341	9,132
31	2,808	......	*17,690	....	14,484	....	1,091	1,372	......	10,184	....	10,347
Mean	4,756	3,397	9,997	27,632	12,858	5,539	1,307	1,273	2,539	7,054	10,776	8,642

* Sunday.

Monthly Discharge of Hudson River at West Virginia Pulp and Paper Co.'s Mill, Mechanicville, N. Y.
[Drainage area, 4,500 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1912.					
January	9,078	2,513	4,756	1.06	1.22
February	5,420	600	3,397	0.755	0.814
March	28,889	2,250	9,997	2.22	2.56
April	47,275	19,403	27,632	6.14	6.85
May	19,915	8,674	12,858	2.86	3.30
June	15,567	1,612	5,539	1.23	1.37
July	2,463	687	1,307	0.29	0.334
August	2,030	677	1,273	0.283	0.326
September	4,329	849	2,539	0.564	0.629
October *a*	32,235	748	7,054	1.57	1.81
November *a*	21,688	6,341	10,776	2.39	2.67
December *a*	11,556	2,861	8,642	1.92	2.21

a Flash-boards erected on dam August 1 and partially carried away on October 24. Owing to very irregular condition of remaining flash-boards from October 24 to December 31, the flow given is very inaccurate.

HUDSON RIVER AT CROCKER'S REEF DAM.

A gage was established above Crocker's Reef 450 feet upstream from the head of Thompson island April 11, 1904, by J. A. O'Connor, for this Department. The reef has since been submerged by construction of a dam for the Barge canal. The gage is a painted scale subdivided to tenths of a foot from zero to 18 feet and is attached to the downstream side of a large elm tree. The gage zero is at elevation 115.06. The regular observer is John H. Donnelly, Jr.

Crocker's Reef dam crosses the Hudson river at the upper end of Thompson island about six miles below Fort Edward. This dam, which was constructed in connection with the New York Barge canal, is of concrete masonry and has an ogee cross-section. The crest is at elevation 119.00, Barge canal datum, and was trowelled down to a uniform level during construction. This was done with care and accuracy, to provide for the use of the dam as a gaging weir. The dam was completed August 27, 1907. A record of the stage of the stream at a distance of about 1,200 feet upstream has been maintained since April 11, 1904. The mean daily elevations for the years 1904 to 1908, inclusive, are contained in the State Engineer's report for 1908, pages 641–644. Computations of discharge have been made, beginning September 1, 1907.

The entire flow of the Hudson river passes over this dam, excepting what is carried past the dam in the present Champlain canal. The accompanying tables show the flow of the river proper, not including the flow in Champlain canal. The results of gagings to determine the flow in Champlain canal are also given. The discharge over the dam has been computed, using a variable coëfficient, the coëfficient used being 3.09 for low stages of the stream, but increasing as depth on crest increases. It is assumed that the natural slope in the channel from the gage down to the dam is approximately equal to the head due to velocity of approach and that the two elements counterbalance, no separate correction for velocity of approach being made.

At higher stages of the stream the Crocker's Reef dam becomes submerged and the discharge is less than for an unsubmerged weir with the same depth on the crest. The flow for higher stages has been reduced to take into account the effect of submergence.

Mean Daily Discharge, Second-feet, of Hudson River at Crocker's Reef Dam.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	5,500	1,875	2,199	12,975	11,850	10,364	702	830	*965	2,050	4,236	*2,199
2	5,225	2,199	2,050	12,975	11,100	*10,032	702	1,250	965	1,875	4,236	2,950
3	4,482	2,348	*702	12,600	9,350	8,100	468	1,250	1,700	1,550	*3,150	4,236
4	3,990	*965	2,050	11,475	10,364	6,879	468	*830	1,400	1,875	4,482	8,700
5	3,770	2,750	1,700	12,600	*7,479	5,775	702	702	2,050	1,875	3,990	9,000
6	2,950	1,700	1,875	16,450	8,100	4,950	1,100	965	1,400	*1,100	3,770	9,700
7	*1,700	2,199	1,700	*21,322	8,400	4,236	*360	1,250	2,050	830	3,770	8,700
8	2,950	1,875	1,400	29,950	9,000	3,990	830	1,100	*2,199	1,250	8,700	*8,400
9	2,348	1,875	1,400	28,400	7,479	*2,950	965	1,400	1,250	1,250	11,850	7,158
10	2,199	1,550	*1,250	26,200	8,700	3,350	702	1,550	1,550	1,550	*13,724	6,325
11	2,348	*702	2,348	21,645	6,050	2,950	1,250	*1,400	1,875	1,700	12,225	6,050
12	2,348	2,199	1,400	18,700	*6,325	2,950	1,250	1,400	1,400	1,700	11,100	4,716
13	1,875	1,700	2,199	16,050	4,950	2,950	1,250	1,250	1,250	*1,400	9,000	4,716
14	*965	1,875	2,348	*14,499	6,879	2,549	*702	1,700	1,400	1,550	8,400	3,550
15	1,550	1,100	2,348	14,900	7,800	2,348	965	1,550	*830	1,550	8,400	*2,950
16	1,700	1,875	6,050	18,015	6,600	*1,400	1,250	1,700	2,348	1,550	7,800	3,990
17	1,700	1,700	*6,050	24,650	9,350	2,199	965	1,700	1,400	2,199	*6,879	4,236
18	1,550	*468	7,800	29,548	10,032	2,050	1,250	*1,250	1,700	2,199	6,600	2,750
19	1,700	2,050	9,350	31,550	*9,350	1,875	1,250	1,700	2,050	2,199	5,775	3,550
20	2,199	1,550	10,032	30,350	9,350	1,875	1,250	1,400	2,199	*2,050	5,225	3,990
21	*1,700	1,550	7,800	*26,550	10,364	1,550	*702	1,400	2,199	965	4,950	5,225
22	2,750	1,250	6,600	22,775	15,650	1,875	702	1,250	*1,100	2,199	4,482	*4,482
23	2,199	1,550	6,600	22,775	16,825	*1,700	1,250	1,400	1,700	2,348	3,990	4,716
24	2,050	1,875	*5,775	25,465	15,650	1,550	1,250	1,700	1,700	4,716	*3,150	4,236
25	2,050	*965	5,500	23,525	14,900	1,250	1,250	*965	1,400	3,550	3,990	2,549
26	2,050	2,199	4,482	20,200	*12,600	1,550	1,250	1,700	1,700	4,482	4,482	3,770
27	1,550	1,875	4,482	17,200	11,475	965	1,250	1,700	2,348	*4,482	3,350	3,350
28	*965	2,199	4,236	*16,050	10,032	965	*575	1,550	2,199	3,990	3,350	2,549
29	1,550	1,250	6,050	16,050	9,000	1,250	702	1,400	*1,500	2,549	2,750	*1,550
30	1,400	......	9,700	14,499	9,350	*1,250	830	1,400	2,549	6,050	2,348	3,150
31	2,050	......	*9,350	....	10,732	....	1,100	1,875	......	4,950	....	3,350
Mean	2,367	1,699	4,414	20,331	9,841	3,256	943	1,372	1,681	2,374	6,005	4,735

* Sunday.

Monthly Discharge of Hudson River at Crocker's Reef Dam.
[Drainage area, 2,959 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1912.					
January	5,500	965	2,367	0.80	0.922
February	2,750	468	1,699	0.574	0.619
March	10,032	702	4,414	0.149	0.172
April	31,550	11,475	20,331	6.87	7.66
May	16,825	6,050	9,841	3.33	3.84
June	10,364	965	3,256	1.10	1.23
July	1,250	360	943	0.319	0.368
August	1,875	702	1,372	0.464	0.535
September	2,549	830	1,681	0.568	0.634
October	6,050	830	2,374	0.802	0.925
November	13,724	2,348	6,005	2.03	0.226
December	9,700	1,550	4,735	1.60	1.84

HUDSON RIVER AT FORT EDWARD DAM.

This station, which is located at the dam of the International Paper Company, was established by Geo. W. Rafter in 1895, in connection with Upper Hudson storage surveys. Since 1899 this station has been maintained by the U. S. Geological Survey and by this Department. The dam is of framed timber on slate rock foundation, and has but little leakage. The crest is straight, very nearly level, and 587.6 feet in length. Flash-boards are usually maintained on the dam from 15 inches to 18 inches in height. A record is kept of the height of flash-boards, and of the times of their setting and removal.

There are 62 water-wheels in the adjoining mill. These are nearly all of modern types which have been tested at the Holyoke flume. A record is kept of the daily run of each in hours, as well as of the working head, which is usually 18 feet. The discharge through the turbines is taken from diagrams expressing the flow as a function of the working head and number of wheel-hours run.

In the winter of 1896–1897, a flood spillway was cut around the south end of the dam, over which the water begins to flow whenever it reaches the level of the crest of the flash-boards. The profile of the spillway is very irregular and causes some uncertainty in the calculated flow during time of high water.

Whenever the flash-boards are off from the main dam, the flow is computed by means of coëfficients derived from the United States Geological Station experiments on a model dam of similar cross-section.

With the flash-boards on, the flow has been computed from Francis' well-known formula for the thin-edged weir. During the dry season, but little water passes over the dam, the entire flow being employed to drive the turbines.

The drainage area tributary to the Hudson above Fort Edward is 0.62 of that of the same stream above Mechanicville gaging station. The principal intervening tributaries are the Hoosic river and Batten kill.

During the navigation season water is diverted from the Hudson river for the supply of the Champlain canal at Glens Falls feeder dam, seven miles upstream from Fort Edward, and also at the Northumberland dam.

Mean Daily Discharge, Second-feet, of Hudson River at International Paper Co.'s Dam at Fort Edward, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	5,529	2,096	2,748	5,230	10,638	8,798	1,846	1,332	717	1,983	4,174	1,857
2.....	4,340	2,667	2,449	5,114	9,983	9,396	1,705	1,287	352	1,579	4,157	3,615
3.....	4,755	2,570	1,353	5,230	7,923	6,898	1,762	1,198	1,813	2,111	2,446	4,997
4.....	3,103	1,633	2,749	5,161	7,115	5,618	352	352	1,603	2,057	4,304	8,260
5.....	3,575	4,531	2,216	5,230	10,690	4,928	2,083	1,016	1,485	2,067	4,074	8,260
6.....	4,109	2,952	2,069	5,446	8,354	4,448	1,473	1,297	1,575	827	4,005	7,370
7.....	1,972	2,695	1,423	23,424	7,698	4,323	685	1,262	1,245	1,548	4,077	7,635
8.....	3,424	2,618	2,004	31,732	7,723	4,005	1,368	1,334	698	1,261	7,635	6,572
9.....	3,146	2,702	2,414	27,027	6,648	4,976	1,459	1,670	1,813	1,324	11,868	7,239
10.....	3,378	2,443	1,103	24,608	6,515	3,347	1,438	1,887	1,303	1,324	12,552	6,605
11.....	3,363	1,353	2,671	20,015	5,398	2,836	1,718	352	1,423	1,548	10,081	6,071
12.....	3,142	2,755	2,493	16,364	5,576	3,306	1,474	2,306	1,184	2,245	8,481	5,115
13.....	3,204	2,203	2,503	14,037	5,248	3,434	1,747	1,691	1,184	352	7,239	5,022
14.....	736	2,044	1,822	15,798	6,065	3,073	352	1,810	1,282	2,503	6,843	3,769
15.....	1,985	1,973	3,040	14,047	7,698	2,645	1,720	1,474	352	2,143	6,667	3,407
16.....	2,967	1,907	3,447	16,765	5,648	1,677	1,438	1,783	2,028	2,795	6,497	4,410
17.....	2,425	2,490	2,870	22,581	8,448	2,488	1,403	1,595	1,851	2,232	4,199	3,653
18.....	2,457	1,259	4,198	29,419	9,398	2,331	1,522	366	2,200	2,232	6,151	3,379
19.....	2,629	2,522	4,198	30,686	9,186	2,488	1,314	2,032	2,947	2,242	5,033	4,147
20.....	2,852	2,175	4,198	28,559	8,198	2,446	2,196	1,368	2,614	778	4,212	4,992
21.....	2,012	2,278	4,270	27,297	8,998	2,384	352	1,403	2,462	2,091	3,974	5,328
22.....	3,403	1,904	4,198	22,560	13,920	2,749	1,495	1,297	1,229	1,799	3,968	7,255
23.....	2,998	2,514	4,198	22,581	15,535	1,124	1,580	1,702	2,253	2,016	3,549	4,637
24.....	2,722	2,612	2,288	25,546	14,328	2,652	1,610	1,751	2,024	3,101	4,375	4,198
25.....	2,060	1,447	4,198	21,702	13,489	1,227	1,837	352	1,548	9,347	3,578	3,393
26.....	2,760	3,636	4,198	21,012	11,367	1,262	1,790	1,863	1,940	11,522	3,535	4,198
27.....	2,393	2,551	4,153	16,869	10,903	1,509	2,070	1,706	2,657	8,157	3,817	3,532
28.....	1,696	2,503	4,198	13,944	8,598	1,297	352	1,558	2,656	7,083	3,535	3,502
29.....	2,954	2,029	4,198	15,232	7,498	1,814	1,389	1,236	1,438	5,790	3,137	2,077
30.....	1,926	......	4,212	12,180	8,198	930	1,287	1,465	2,264	4,608	2,736	4,198
31.....	2,284	......	3,254	......	8,798	......	1,297	1,699	......	4,403	......	3,827
Mean.	2,913	2,381	3,075	18,180	8,896	3,347	1,423	1,401	1,671	3,067	5,363	4,920

Monthly Discharge of Hudson River at International Paper Co.'s Dam at Fort Edward, N. Y.
[Drainage area, 2,800 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1912.					
January	5,529	736	2,913	1.40	1.61
February	4,531	1,259	2,381	0.85	0.917
March	4,270	1,103	3,075	1.10	1.27
April	31,732	5,114	18,180	6.49	7.24
May	15,535	5,248	8,896	3.18	3.67
June	9,396	930	3,347	1.20	1.34
July	2,196	352	1,423	0.508	0.586
August	2,306	352	1,401	0.50	0.576
September	2,947	352	1,671	0.597	0.666
October	11,522	352	3,067	1.10	1.27
November	12,522	2,446	5,363	1.92	2.14
December	8,260	1,857	4,920	1.76	2.03

HUDSON RIVER NEAR THURMAN, N. Y.

This station is located at the Delaware and Hudson railroad bridge leading from Thurman to Warrensburg, about 950 feet below the highway bridge to Warrensburg and some 2,000 feet below the entrance of Schroon river into the Hudson. It was established, in coöperation with the New York State Water Supply Commission, September 22, 1907, to obtain general statistical and comparative data regarding the flow of the Hudson river.

There is a dam on Schroon river at Warrensburg, about three miles above the station. On the Hudson there is a dam at Luzerne about twelve miles below. During the winter months the discharge is affected by ice, and the station discontinued.

The datum of the chain gage attached to the bridge has remained the same during the maintenance of the station. Conditions for obtaining accurate discharge data are excellent and a very good rating curve has been developed. All measurements are made from the bridge.

The regimen of flow of the Upper Hudson, especially during the low-water season, has been considerably affected by storage in Indian Lake reservoir.

Mean Daily Gage Height, in Feet, of Hudson River near Thurman, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	3.80	5.40	5.20	5.80	5.20	4.80	2.70	2.50	2.65	2.85	3.40	3.10
2.....	6.20	5.40	5.10	5.60	4.90	4.60	2.48	2.46	2.95	3.05	3.40	3.00
3.....	6.50	5.50	5.10	5.40	4.70	4.40	2.46	2.55	3.00	2.95	3.40	3.70
4.....	6.50	5.60	5.10	5.10	3.85	4.10	2.34	2.60	3.10	2.85	3.40	3.90
5.....	6.20	5.60	5.20	5.00	5.00	4.00	2.55	2.90	2.95	2.80	3.30	3.90
6.....	5.50	5.40	5.10	5.40	3.85	3.80	2.47	2.80	2.95	2.38	3.20	3.80
7.....	5.40	5.40	5.20	6.70	4.70	3.75	2.31	2.80	3.00	2.80	3.20	4.00
8.....	5.90	5.30	5.20	6.70	3.85	3.60	2.65	2.85	2.85	2.70	4.60	4.00
9.....	6.00	5.30	5.10	6.70	4.20	3.05	2.50	2.85	3.00	2.75	5.00	3.70
10.....	6.20	5.30	5.10	6.40	4.20	3.35	3.00	2.95	2.95	2.85	4.80	3.60
11.....	5.80	5.30	5.10	6.00	4.00	3.25	2.70	2.65	2.85	3.00	4.50	3.50
12.....	5.50	5.40	5.10	5.60	4.10	3.35	2.65	2.95	2.80	2.95	4.20	3.40
13.....	5.30	5.30	5.20	5.40	4.80	3.15	2.55	3.00	2.80	2.85	4.10	3.30
14.....	5.30	5.30	5.20	5.40	5.30	3.15	2.50	3.00	2.75	3.40	4.00	3.20
15.....	5.40	5.10	5.10	5.50	5.00	2.95	2.80	2.90	2.55	3.50	4.20	3.10
16.....	5.30	5.10	5.20	6.70	5.10	2.70	2.70	2.90	3.05	3.35	4.20	3.10
17.....	5.40	5.10	5.30	7.90	4.80	3.00	2.65	2.80	3.05	3.20	4.10	3.00
18.....	5.80	5.10	5.40	8.00	4.70	3.00	2.60	2.65	3.00	2.85	4.00	3.00
19.....	5.80	5.00	5.30	7.90	4.70	3.00	2.55	2.85	3.10	2.75	3.80	3.20
20.....	5.60	5.00	5.50	7.40	4.60	2.95	2.55	2.80	2.95	2.60	3.65	3.30
21.....	5.40	5.00	5.30	6.80	5.20	2.85	2.50	2.85	2.75	2.80	3.70	3.50
22.....	5.40	5.20	5.10	6.60	6.20	2.80	2.80	2.90	2.50	2.65	3.60	3.40
23.....	5.30	5.20	4.90	7.50	6.00	2.32	2.75	2.90	3.00	2.75	3.45	3.40
24.....	5.30	5.30	4.90	7.00	5.70	2.95	2.75	2.90	2.80	3.40	3.35	3.20
25.....	5.30	5.20	4.60	6.60	5.60	3.00	2.65	2.65	2.80	4.30	3.40	3.00
26.....	5.30	5.20	4.60	5.90	5.10	2.85	2.60	3.00	2.80	4.30	3.30	3.00
27.....	5.50	5.20	4.50	6.20	4.90	2.80	2.60	2.95	2.90	4.20	3.20	3.00
28.....	5.30	5.30	4.60	5.70	4.60	2.85	2.60	3.00	2.90	3.95	3.10	3.10
29.....	5.70	5.20	4.60	5.80	4.40	2.80	2.70	2.95	2.46	3.75	3.00	3.10
30.....	5.50	......	4.70	5.20	4.80	2.38	2.60	2.95	2.90	3.50	3.10	3.10
31.....	5.50	......	5.30	......	5.00	......	2.55	2.80	......	3.45	......	3.20

NOTE.— Relation of gage height to discharge was affected by ice, January 1 to about April 5. A log jam formed June 17 and caused some backwater at the gage for the remainder of the year. There were other log jams before June 17, but apparently they did not affect the gage heights.

Current-meter Discharge Measurements of Hudson River near Thurman, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Computed discharge.
			Second-feet.
1912.			
June 21......	G. H. Canfield..	2.87	1,190
June 28......	G. H. Canfield..	2.80	1,108
July 4......	G. H. Canfield..	2.32	616
Aug. 1......	J. G. Mathers..	2.54	796

Mean Daily Discharge, Second-feet, of Hudson River near Thurman, N. Y.

DAY.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.									
1	......	7,520	6,320	990	770	935	1,180	2,150	1,560
2	......	6,620	5,730	752	734	1,320	1,470	2,150	1,390
3	......	6,020	5,150	734	825	1,390	1,320	2,150	2,840
4	......	3,610	4,290	632	880	1,560	1,180	2,150	3,330
5	......	6,920	4,010	825	1,240	1,320	1,110	1,940	3,330
6	8,120	3,610	3,480	743	1,110	1,320	664	1,740	3,080
7	12,000	6,020	3,360	608	1,110	1,390	1,110	1,740	3,590
8	12,000	3,610	2,990	935	1,180	1,180	990	5,290	3,590
9	12,000	4,570	1,760	770	1,180	1,390	1,050	6,470	2,840
10	11,100	4,570	2,400	1,390	1,320	1,320	1,180	5,870	2,600
11	9,920	4,010	2,180	990	935	1,180	1,390	5,000	2,370
12	8,720	4,290	2,400	935	1,320	1,110	1,320	4,140	2,150
13	8,120	6,320	1,960	825	1,390	1,110	1,180	3,860	1,940
14	8,120	7,820	1,960	770	1,390	1,050	2,150	3,590	1,740
15	8,420	6,920	1,560	1,110	1,240	825	2,370	4,140	1,560
16	12,000	7,220	1,140	990	1,240	1,480	2,040	4,140	1,560
17	15,600	6,320	1,390	935	1,110	1,480	1,740	3,860	1,390
18	15,900	6,020	1,390	880	935	1,390	1,180	3,590	1,390
19	15,600	6,020	1,390	825	1,180	1,560	1,050	3,080	1,740
20	14,100	5,730	1,320	825	1,110	1,320	880	2,720	1,940
21	12,300	7,520	1,180	770	1,180	1,050	1,110	2,840	2,370
22	11,700	10,500	1,110	1,110	1,240	770	940	2,600	2,150
23	14,400	9,920	616	1,050	1,240	1,390	1,050	2,260	2,150
24	12,900	9,020	1,320	1,050	1,240	1,110	2,150	2,040	1,740
25	11,700	8,720	1,390	935	935	1,110	4,420	2,150	1,390
26	9,620	7,220	1,180	880	1,390	1,110	4,420	1,940	1,390
27	10,500	6,620	1,110	880	1,320	1,240	4,140	1,740	1,390
28	9,020	5,730	1,180	880	1,390	1,240	3,460	1,560	1,560
29	9,320	5,150	1,110	990	1,320	734	2,960	1,390	1,560
30	7,520	6,320	664	880	1,320	1,240	2,370	1,560	1,560
31	......	6,920	......	825	1,110	......	2,260	......	1,740

NOTE.— Daily discharge, April 6 to June 16, determined from a fairly well-defined rating curve. Daily discharge, June 17 to December 31, determined from a fairly well-defined rating curve, based on measurements made during the existence of the log jam.

Monthly Discharge of Hudson River near Thurman, N. Y.
[Drainage area, 1,550 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1912.					
January	....	....	1,700	1.10	1.27
February	....	....	1,500	0.968	1.04
March	....	....	1,300	0.839	0.97
April	15,900	1,650	9,880	6.37	7.11
May	10,500	3,610	6,370	4.11	4.74
June	6,320	616	2,230	1.44	1.61
July	1,390	608	894	0.577	0.67
August	1,390	734	1,160	0.748	0.86
September	1,560	770	1,220	0.787	0.88
October	4,420	664	1,800	1.16	1.34
November	6,470	1,390	3,000	1.94	2.16
December	3,590	1,390	2,100	1.35	1.56

NOTE.— Discharge, January 1 to April 5, estimated from the combined discharge of Schroon river and Hudson river at North Creek, considering the probable inflow between North Creek and Thurman. Mean discharge, April 1 to 5, estimated at 3,110 second-feet.

HUDSON RIVER AT NORTH CREEK, N. Y.

This station is located on the steel highway bridge at North Creek. It was established by the U. S. Geological Survey in coöperation with the New York State Water Supply Commission, September 21, 1907, to obtain general statistical and comparative data in regard to the flow of the Hudson.

North creek, a small tributary of the Hudson, enters from the right a short distance below this point.

The datum of the chain gage attached to the bridge has remained the same during the maintenance of the station. During the winter months the discharge is affected by the presence of ice. Conditions for obtaining accurate discharge data are good and a very good rating curve has been developed. All discharge measurements are made from the bridge.

The regimen of flow of the Upper Hudson, especially during the low-water season, has been considerably affected by storage in Indian Lake reservoir.

Information in regard to this station is contained in the annual reports of the United States Geological Survey.

Mean Daily Gage Height, in Feet, of Hudson River at North Creek, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	3.10	......	......	......	4.80	4.90	2.65	2.70	3.00	2.90	3.30	2.80
2	3.00	......	......	......	4.50	4.60	2.65	2.70	3.10	3.10	3.45	2.80
3	2.95	......	......	5.60	3.60	4.20	2.60	2.90	3.10	3.05	3.45	3.50
4	2.90	......	......	......	3.85	4.00	2.60	3.00	3.20	2.95	3.35	3.95
5	2.85	......	......	......	4.70	3.85	2.65	3.05	3.20	2.80	3.25	3.85
6	3.95	......	......	5.60	4.10	3.65	2.65	3.05	3.20	2.75	3.15	3.80
7	......	4.80	......	6.00	4.40	3.55	2.65	3.00	3.20	2.70	3.10	4.00
8	......	4.90	......	6.70	3.65	3.40	2.60	3.00	3.30	2.65	4.70	4.00
9	......	......	......	6.40	4.30	3.10	2.95	3.00	3.20	2.75	5.40	3.70
10	4.40	......	......	5.80	3.85	3.25	3.05	3.00	3.10	2.90	5.10	3.55
11	......	......	......	5.20	4.30	3.10	2.85	3.00	3.00	2.95	4.70	3.45
12	......	......	......	4.80	3.80	3.15	2.80	3.05	2.95	3.10	4.30	3.30
13	......	......	4.80	4.60	4.60	3.05	2.80	3.05	2.95	3.30	4.00	3.10
14	......	4.80	5.00	4.70	5.60	2.95	2.85	3.15	2.90	3.60	3.95	3.05
15	......	......	......	4.90	4.60	2.75	2.85	3.10	2.90	3.70	4.10	3.00
16	......	......	......	6.70	5.40	2.75	2.80	3.10	3.00	3.55	4.10	3.00
17	3.80	......	......	8.20	6.00	2.75	2.75	3.05	3.05	3.25	3.95	2.90
18	......	......	......	8.00	5.00	2.75	2.75	3.00	3.05	3.00	3.75	2.85
19	4.60	......	......	7.70	4.90	2.70	2.75	3.00	3.15	2.90	3.55	3.00
20	......	......	5.00	7.00	4.70	2.60	2.75	3.00	2.80	2.80	3.60	3.40
21	......	4.80	......	6.40	5.70	2.60	2.75	3.00	2.70	2.75	3.70	3.45
22	......	......	......	6.30	6.60	2.55	2.95	3.05	2.90	2.65	3.50	3.40
23	......	......	4.70	7.10	6.20	2.50	2.95	3.05	2.85	2.65	3.30	3.30
24	4.30	......	......	6.80	6.00	2.75	2.95	3.05	2.80	3.10	3.20	3.15
25	......	......	......	6.10	5.50	2.75	2.90	3.05	2.80	4.60	3.20	3.10
26	......	......	......	5.30	4.90	2.75	2.80	3.00	2.95	4.70	3.10	3.00
27	......	......	4.40	5.20	4.60	2.75	2.80	3.05	3.05	4.50	3.00	2.95
28	......	......	......	5.20	4.30	2.65	2.75	3.15	2.95	4.20	3.00	2.90
29	......	5.30	......	5.40	4.20	2.70	2.75	3.15	2.80	3.90	2.90	2.85
30	......	......	......	4.60	4.80	2.65	2.75	3.10	2.75	3.60	2.80	2.90
31	4.50	......	......	......	5.10	......	2.70	3.05	......	3.45	......	2.90

NOTE.— Relation of gage height to discharge was affected by ice, January 6 to April 5.

Current-meter Discharge Measurements of Hudson River at North Creek, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Computed discharge.
1912.			*Second-feet.*
Jan. 19 [a]	Frank Weber	4.60	883
Feb. 8 [a]	Frank Weber	4.89	1,090
Feb. 29 [a]	Frank Weber	5.26	989
March 14 [a]	Frank Weber	5.03	821
March 23 [a]	Frank Weber	4.74	773
June 22	G. H. Canfield	2.52	466

[a] Measurement made under complete ice cover.

Mean Daily Discharge, Second-feet, of Hudson River at North Creek, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1					3,680	3,880	570	610	890	790	1,220	700
2					3,100	3,290	570	610	990	990	1,420	700
3					1,620	2,570	530	790	990	940	1,420	1,480
4					2,000	2,240	530	890	1,100	840	1,280	2,160
5					3,480	2,000	570	940	1,100	700	1,160	2,000
6				5,440	2,400	1,700	570	940	1,100	655	1,040	1,920
7				6,430	2,920	1,550	570	890	1,100	610	990	2,240
8		1,090		8,330	1,700	1,350	530	890	1,220	570	3,480	2,240
9				7,490	2,740	990	840	890	1,100	655	4,970	1,770
10				5,930	2,000	1,160	940	890	990	790	4,300	1,550
11				4,520	2,740	990	745	890	890	840	3,480	1,420
12				3,680	1,920	1,040	700	940	840	990	2,740	1,220
13				3,290	3,290	940	700	940	840	1,220	2,240	990
14			821	3,480	5,440	840	745	1,040	790	1,620	2,160	940
15				3,888	3,290	655	745	990	790	1,770	2,400	890
16				8,330	4,970	655	700	990	890	1,550	2,400	890
17				12,900	6,430	655	655	940	940	1,160	2,160	790
18				12,300	4,090	655	655	890	940	890	1,840	745
19	883			11,300	3,880	610	655	890	1,040	790	1,550	890
20				9,200	3,480	530	655	890	700	700	1,620	1,350
21				7,490	5,680	530	655	890	610	655	1,770	1,420
22				7,220	8,050	495	840	940	790	570	1,480	1,350
23			773	9,490	6,950	460	840	940	745	570	1,220	1,220
24				8,620	6,430	655	840	940	700	990	1,100	1,040
25				6,690	5,200	655	790	940	700	3,290	1,100	990
26				4,740	3,880	655	700	890	840	3,480	990	890
27				4,520	3,290	655	700	940	940	3,100	890	840
28				4,520	2,740	570	655	1,040	840	2,570	890	790
29		989		4,970	2,570	610	655	1,040	700	2,080	790	745
30				3,290	3,680	570	655	990	655	1,620	700	790
31					4,300		610	940		1,420		790

NOTE.— Daily discharge determined from a well-defined rating curve.

Monthly Discharge of Hudson River at North Creek, N. Y.

[Drainage area, 804 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage. area.
1912.					
January	....	....	800	0.995	1.15
February	....	....	1,060	1.32	1.42
March	....	....	818	1.02	1.18
April	12,900	800	5,850	7.28	8.12
May	8,050	1,620	3,800	4.73	5.45
June	3,880	460	1,140	1.42	1.58
July	940	530	681	0.847	0.98
August	1,040	610	911	1.13	1.30
September	1,220	610	892	1.11	1.24
October	3,480	570	1,270	1.58	1.82
November	4,970	700	1,830	2.28	2.54
December	2,240	700	1,220	1.52	1.75

NOTE.— Discharge, January 6 to March 5, estimated by means of five measurements made with ice present, climatological records, consideration of storage and comparison of the discharge with that at other stations.

Mean discharge, January 6 to 31, estimated at 790 second-feet.

Mean discharge, April 1 to 5, estimated at 1,540 second-feet.

HOOSIC RIVER.

DESCRIPTION.

Hoosic river has its sources on the west slope of the Hoosac mountains in Vermont and Massachusetts. Two head branches, one flowing southward, the other northward along the west slope of this range, unite at North Adams, Mass., and the stream then flows northwestward, entering the Hudson three miles north of Mechanicville. Above Buskirk the drainage basin is rugged and precipitous, the distribution of tributaries affording rapid concentration of the run-off from the steep rock slopes. The ridges are sparsely wooded. The soil in the valleys is generally firm and tenacious. The general elevation of the valley at the junction of the head waters is 1,000 feet. Numerous dams, affording power for textile, agricultural implement, and other industries, are scattered throughout the length of the stream from North Adams to Schaghticoke. The drainage basin contains no important lakes and but little storage in reservoirs.

HOOSIC RIVER AT SCHAGHTICOKE, N. Y.

The gaging records for this station have been furnished this Department by the Schenectady Power Co., which maintains the station in connection with its hydro-electric plant at Schaghticoke.

Mean Daily Discharge, Second-feet, of Hoosic River at Schaghticoke, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1......	682	277	243	3,831	1,146	1,227	324	127	67	231	810	370
2......	983	312	428	4,298	1,018	983	324	69	13	150	814	960
3......	832	300	......	3,854	844	833	309	162	119	346	648	2,349
4......	787	219	428	2,835	775	1,574	10	11	203	150	625	1,215
5......	451	254	185	4,143	844	926	196	23	168	138	567	1,157
6......	451	324	347	5,289	1,007	926	208	138	119	34	370	1,018
7......	196	115	266	10,914	1,261	1,007	......	104	157	115	1,064	1,203
8......	486	289	1,018	9,585	1,145	798	208	115	62	127	1,944	879
9......	509	162	1,574	5,000	1,192	717	104	92	......	127	1,192	1,030
10......	497	451	648	4,247	1,200	787	81	127	79	185	648	810
11......	543	138	555	3,032	1,331	625	104	69	115	254	972	867
12......	266	......	1,470	3,217	1,145	740	104	115	127	196	1,007	625
13......	335	254	1,875	2,870	1,238	729	185	266	81	150	914	659
14......	289	324	2,060	2,141	1,273	625	......	104	115	219	1,620	646
15......	416	243	6,828	2,361	1,078	555	81	34	92	266	1,342	474
16......	381	243	7,384	3,379	1,261	381	150	23	393	243	1,226	578
17......	370	358	2,280	3,275	3,429	578	69	188	277	219	1,087	613
18......	479	......	2,557	2,523	1,064	544	405	......	138	185	972	636
19......	1,203	254	2,893	2,453	972	567	219	104	405	243	868	1,192
20......	1,342	879	3,310	2,187	1,284	347	266	92	428	92	775	1,168
21......	833	833	2,789	1,921	1,388	416	23	127	185	92	798	914
22......	1,504	1,469	1,944	2,164	1,081	254	185	127	115	231	706	556
23......	555	787	2,199	1,678	1,250	254	175	185	208	2,720	682	682
24......	497	659	2,002	2,199	1,076	312	150	335	162	5,451	578	717
25......	127	763	1,863	2,280	821	374	138	117	162	5,798	821	289
26......	486	995	1,284	1,666	775	254	104	182	150	3,321	821	717
27......	312	544	3,518	1,741	1,018	69	150	152	103	1,956	659	740
28......	335	439	1,319	1,514	787	219	......	130	127	949	590	844
29......	300	347	1,076	1,666	1,296	196	46	138	46	1,203	544	497
30......	486	......	4,189	1,273	5,532	......	81	92	162	1,030	601	1,493
31......	347	......	3,055	......	4,907	......	34	135	......	717	......	3,030
Mean.	557	453	2,053	3,318	1,432	614	158	123	158	875	876	933

Monthly Discharge of Hoosic River at Schaghticoke, N. Y.
[Drainage area, 635 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1912.					
January	1,504	127	557	0.877	1.01
February	1,469	115	453	0.713	0.769
March	7,384	185	2,053	3.23	3.72
April	10,914	1,273	3,318	5.23	5.84
May	5,532	775	1,432	2.26	2.61
June	1,574	69	614	0.967	1.08
July	405	10	158	0.249	0.287
August	335	11	123	0.194	0.224
September	428	13	158	0.249	0.278
October	5,798	34	875	1.38	1.59
November	1,944	370	876	1.38	1.54
December	3,030	289	933	1.47	1.70

HOOSIC RIVER AT JOHNSONVILLE, N. Y.

The Schenectady Power Co. maintains gaging records in connection with its hydro-electric plant at Johnsonville and has furnished this Department with the records for this station.

Mean Daily Discharge, Second-feet, of Hoosic River at Johnsonville, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	614	249	219	3,448	1,031	1,104	292	114	60	208	729	333
2	885	281	385	3,868	916	885	202	62	12	135	733	864
3	749	270	......	3,469	760	750	278	146	107	311	583	2,114
4	708	197	385	2,551	697	1,417	9	10	183	135	563	1,093
5	406	229	167	3,729	760	833	176	21	151	124	510	1,041
6	406	292	312	4,760	906	833	187	124	107	31	333	916
7	176	103	239	9,823	1,135	906	......	94	141	103	958	1,083
8	437	260	916	8,627	1,031	718	187	103	56	114	1,750	791
9	458	146	1,417	4,500	1,073	645	94	83	......	114	1,073	927
10	447	406	583	3,822	1,080	708	73	114	71	167	583	729
11	489	124	499	2,729	1,198	56	94	62	103	229	875	780
12	239	......	1,323	2,895	1,031	666	94	103	114	176	906	563
13	301	229	1,687	2,583	1,114	656	167	239	73	135	823	593
14	260	292	1,854	1,927	1,146	563	......	94	103	197	1,458	581
15	374	219	6,145	2,125	970	499	73	31	83	239	1,208	427
16	343	219	6,646	3,041	1,135	343	135	21	354	219	1,103	520
17	333	322	2,052	2,947	3,086	520	62	169	249	197	978	552
18	431	......	2,301	2,271	958	490	365	......	124	167	875	572
19	1,083	229	2,604	2,208	875	510	197	94	365	219	781	1,073
20	1,208	791	2,979	1,968	1,156	312	239	83	385	83	697	1,051
21	750	750	2,510	1,729	1,249	374	21	114	167	83	718	823
22	1,354	1,322	1,750	1,948	973	229	167	114	103	208	635	500
23	499	708	1,979	1,510	1,125	229	157	167	187	2,448	614	614
24	447	593	1,802	1,979	968	281	135	301	146	4,906	520	645
25	114	687	1,677	2,052	739	337	124	105	146	5,218	739	260
26	437	895	1,156	1,499	697	229	94	164	135	2,989	739	645
27	281	490	3,166	1,567	916	62	135	137	93	1,760	593	666
28	301	395	1,187	1,363	708	197	......	117	114	854	531	760
29	270	312	968	1,499	1,166	176	41	124	41	1,083	490	447
30	437	......	3,770	1,146	4,979	......	73	83	146	927	541	1,344
31	312	......	2,749	......	4,416	......	31	121	......	645	......	2,727
Mean.	502	408	1,848	2,986	1,290	553	143	110	142	788	788	840

Monthly Discharge of Hoosic River at Johnsonville, N. Y.
[Drainage area, 609 square miles.]

MONTH.	Discharge in Second-feet.				Run-off
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1912.					
January	1,354	114	502	0.824	0.95
February	1,322	103	408	0.67	0.723
March	6,646	167	1,848	3.03	3.49
April	9,823	1,146	2,986	4.90	5.47
May	4,979	697	1,290	2.12	2.44
June	1,417	56	553	0.908	1.01
July	365	9	143	0.235	0.271
August	301	10	110	0.181	0.209
September	385	12	142	0.233	0.26
October	5,218	31	788	1.29	1.49
November	1,750	333	788	1.29	1.44
December	2,727	260	840	1.38	1.59

HOOSIC RIVER ABOVE EAGLE BRIDGE, N. Y.

August 13, 1910, a chain-gage was established on the left bank of Hoosic river about one mile upstream from Eagle Bridge and one-half mile below the mouth of Walloomsac river. This gage was installed to replace the gaging station at Buskirk. The gage is of the chain-and-weight type and is supported by a cantilever arm 14 feet in length securely fastened to two trees a short distance back from the edge of the bank, which is about 12 feet above low water at this point. Length of chain and weight, 18.62 feet. The gage is referred to two bench-marks: No. 1, spike in blaze on upstream side of walnut tree, 8 inches in diameter and about 10 feet downstream from the gage, elevation 17.565; No. 2, spike in small elm stump, 2 feet high and 2 feet upstream from gage, elevation 17.688. Both elevations are above zero of gage.

The dam of Walter A. Wood & Company, located at Hoosick Falls, about two miles upstream from the gage, has considerable influence on the flow of the stream during low water. Walloomsac river, also slightly controlled by power developments, enters Hoosic river about 1½ miles below the dam at Hoosick Falls.

The channel is fairly straight for 900 to 1,000 feet upstream from the gage and for about the same distance downstream. The left bank, in general, is high and wooded, while the right bank is low and subject to overflows in high water. About 1,000 feet downstream from the gage, the banks are high on both sides and seldom flooded, except during periods of extreme high water, usually caused by temporary ice jams at the railroad bridge about three-fourths mile downstream.

Current-meter Discharge Measurements of Hoosic River above Eagle Bridge, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Computed discharge.
1912.			*Sec.-ft.*
Feb. 27 *a*	C. S. DeGolyer	9.52	684
Mar. 1 *a*	C. S. DeGolyer	8.28	241
Mar. 14	Alexander McMillan	9.80	1,850
Mar. 16	C. S. DeGolyer	12.33	4,950
Mar. 17	C. S. DeGolyer	10.28	2,320

a Measurement made under complete ice cover.

Mean Daily Discharge, Second-feet, of Hoosic River above Eagle Bridge, N. Y.

DAY.	Aug.	Sept.	Oct.	Nov.	Dec.
1910.					
1	......	116	152	116	310
2	......	112	84	112	238
3	......	128	128	230	290
4	......	128	140	950	212
5	......	128	128	880	270
6	......	270	152	745	270
7	......	1,400	142	532	270
8	......	532	135	400	290
9	......	310	116	355	290
10	......	262	195	400	290
11	......	195	152	532	290
12	......	230	128	290	310
13	223	212	171	310	478
14	94	165	128	450	778
15	145	212	105	450	680
16	140	195	105	425	880
17	140	195	128	400	880
18	152	135	128	332	680
19	180	152	116	355	620
20	105	180	128	310	745
21	75	160	105	310	745
22	140	121	84	290	620
23	128	105	135	378	560
24	105	94	128	223	1,090
25	152	84	140	290	2,990
26	105	140	165	310	1,730
27	94	195	152	195	1,640
28	75	212	165	378	1,400
29	105	212	250	355	1,560
30	90	140	165	223	2,880
31	116	......	165	......	1,730
Mean	124	224	139	384	839

Mean Daily Discharge, Second-feet, of Hoosic River above Eagle Bridge, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1911.												
1	......	778	......	1,400	1,480	355	174	189	250	620	1,240	1,320
2	......	650	......	950	2,670	332	212	165	250	880	950	1,160
3	5,040	532	......	950	1,730	332	195	145	174	810	950	950
4	3,340	745	......	950	1,400	195	165	152	195	880	810	950
5	1,560	810	......	1,560	1,090	332	160	88	165	1,640	745	745
6	1,400	532	......	3,220	1,020	378	152	94	270	1,020	810	778
7	1,400	532	......	4,720	810	478	171	180	478	1,240	1,020	778
8	1,090	620	......	2,880	810	450	180	189	620	1,160	1,090	778
9	......	532	......	2,470	745	355	105	180	332	1,020	880	778
10	......	560	......	2,090	650	270	160	116	1,910	880	845	712
11	......	505	......	1,730	590	212	212	160	950	745	810	745
12	......	532	......	1,730	560	400	116	88	745	680	680	880
13	......	505	......	1,730	620	1,820	160	91	505	680	1,640	950
14	......	......	......	2,470	590	1,820	135	68	450	505	1,090	810
15	......	......	2,470	4,720	650	1,090	75	88	378	478	1,090	810
16	......	......	1,090	3,100	532	880	79	116	532	532	1,090	1,160
17	......	......	650	2,280	478	778	180	152	532	505	880	1,480
18	......	......	650	1,730	450	560	171	145	450	532	1,640	1,480
19	......	......	560	1,730	505	532	148	189	478	5,040	2,000	1,240
20	......	......	680	1,560	950	560	160	128	400	2,880	1,480	950
21	......	......	560	1,480	590	425	128	140	378	2,000	1,400	880
22	......	......	745	1,560	505	425	140	84	310	2,990	1,240	950
23	......	......	1,730	1,400	450	355	94	94	378	3,840	1,020	3,840
24	......	......	880	1,240	378	332	160	128	355	2,670	1,160	2,470
25	......	......	650	1,480	400	222	355	81	378	1,910	1,320	1,910
26	......	......	810	1,730	425	332	195	105	298	1,560	950	1,730
27	......	......	3,580	1,730	332	355	171	152	310	1,400	1,090	1,910
28	......	......	6,000	1,910	310	355	140	230	332	1,240	1,020	1,640
29	1,400	......	2,090	1,730	310	310	230	1,240	355	1,090	2,280	1,090
30	1,400	......	3,710	1,560	212	302	171	745	620	1,020	1,560	1,020
31	590	......	1,910	......	270	......	195	425	......	950	......	950

Mean Daily Discharge, Second-feet, of Hoosic River above Eagle Bridge, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	1,020	......	318	3,220	1,400	2,000	310	140	121	302	778	560
2	1,020	......	240	3,980	1,240	1,560	238	212	140	270	810	620
3	880	......	285	3,840	1,090	4,120	230	145	230	230	745	2,780
4	810	......	300	2,570	950	2,280	152	152	290	195	680	1,730
5	680	......	270	2,880	950	1,910	212	230	250	189	560	1,240
6	620	......	270	3,580	1,240	1,560	230	202	238	152	560	1,730
7	505	......	285	5,200	1,400	2,000	145	171	195	140	560	1,820
8	......	......	520	5,600	1,090	1,400	250	135	140	238	2,880	1,320
9	......	......	1,270	3,460	1,090	1,240	202	135	212	145	1,640	1,160
10	......	388	640	2,990	1,480	1,090	195	105	195	180	1,240	1,090
11	......	388	560	2,570	1,090	950	180	135	212	250	1,090	1,020
12	......	422	480	2,180	950	810	270	310	195	290	1,020	950
13	......	422	1,000	2,090	1,090	745	140	160	202	212	810	778
14	......	405	2,000	2,380	1,160	650	140	121	160	310	1,320	745
15	......	352	1,960	2,570	1,090	620	230	140	128	270	1,560	680
16	......	270	5,040	3,580	1,090	560	189	145	400	212	1,240	745
17	......	255	2,570	3,840	2,670	680	230	84	355	180	1,020	620
18	......	228	2,670	2,990	1,910	560	212	116	238	171	950	620
19	......	255	2,670	2,880	1,480	505	450	152	223	332	810	1,090
20	......	318	2,880	2,380	1,400	505	270	140	378	262	745	1,320
21	......	480	2,090	2,000	1,400	400	160	140	202	223	745	845
22	......	1,220	1,730	2,000	1,910	450	262	165	165	212	712	680
23	......	640	1,240	2,470	1,400	278	223	189	238	278	680	745
24	......	440	1,240	2,090	1,240	355	195	400	202	5,500	560	680
25	......	720	1,160	2,090	1,480	355	195	195	171	3,840	1,090	505
26	......	1,000	950	1,730	1,240	302	212	270	171	2,280	845	712
27	......	640	950	1,640	1,090	278	212	165	180	1,640	712	745
28	......	520	1,020	1,400	950	302	128	238	171	1,400	590	778
29	......	370	3,710	1,320	810	230	128	128	145	1,090	650	712
30	......	......	4,120	1,560	3,580	152	212	160	189	950	620	950
31	......	......	2,470	......	2,780	......	212	145	......	810	......	2,880

Note.— Daily discharge for open-water periods determined from a well-defined rating curve. Daily discharge, February 10 to March 15, determined from a rating curve based on measurements made under complete ice cover during the period.

Monthly Discharge of Hoosic River above Eagle Bridge, N. Y.
[Drainage area, 512 square miles.]

MONTH.	Discharge in Second-feet.				Run-off.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1910.					
August 13–31	223	75	124	0.242	*a* 0.17
September	1,400	84	224	0.438	0.49
October	250	84	139	0.271	0.31
November	950	112	384	0.75	0.84
December	2,990	212	839	1.64	1.89
1911.					
January	....	....	1,000	1.95	2.25
February	....	....	512	1.00	1.04
March	6,000	....	1,060	2.07	2.39
April	4,720	950	1,990	3.89	4.34
May	2,670	272	726	1.42	1.64
June	1,820	195	518	1.01	1.13
July	355	75	164	0.32	0.37
August	1,240	68	198	0.387	0.45
September	1,910	165	459	0.896	1.00
October	5,040	478	1,400	2.73	3.15
November	2,280	680	1,160	2.27	2.53
December	3,840	712	1,220	2.38	2.74
1912.					
January	....	....	570	1.11	1.28
February	1,220	228	460	0.898	0.97
March	5,040	240	1,510	2.95	3.40
April	5,600	1,320	2,770	5.41	6.04
May	3,580	810	1,410	2.75	3.17
June	4,120	152	962	1.88	2.10
July	450	128	213	0.416	0.48
August	400	84	172	0.336	0.39
September	400	121	211	0.412	0.46
October	5,500	140	734	1.43	1.65
November	2,880	560	941	1.84	2.05
December	2,880	505	1,060	2.07	2.39

a 19 days.

NOTE.— Discharge January 1 and 2, and 9 to 28, and February 14 to March 14, 1911, estimated from climatologic records and comparative run-off.

Mean discharge, January 1 and 2, 1911, estimated at 2,000 second-feet. Mean discharge, January 9 to 28, 1911, estimated at 490 second-feet. Mean discharge, February 14 to 28, 1911, estimated at 435 second-feet. Mean discharge, March 1 to 14, 1911, estimated at 505 second-feet.

Discharge January 8 to February 10, 1912, estimated from climatologic records, observer's notes and measurements made after this period.

Mean discharge, January 8 to 31, 1912, estimated at 505 second-feet. Mean discharge, February 1 to 10, 1912, estimated at 400 second-feet.

13

SACANDAGA RIVER.

DESCRIPTION.

Sacandaga river is one of the larger tributaries of the upper Hudson. It drains extensive portions of the southeast slope of the Adirondack region as well as a portion of the plateau lying north of Mohawk river and south of the Adirondack mountains. The head waters of the stream rise in the slopes surrounding Lake Pleasant, Sacandaga and Piseco lakes. Above Northville the drainage basin is rugged and almost completely forest-covered.

From Northville to Conklingville the stream winds through a sandy valley flanked by steep slopes. The width of this valley averages about one mile from Northampton to Conklingville. Above Northampton is an extensive flat lying at elevation of about 740 feet. This flat is drained by Mayville, Vly and Hann's creeks, and contains extensive swamp areas. From Northville to Conklingville, a distance along the general course of the stream of about 22 miles, there is very little fall. The elevation at Conklingville is about 720 feet. Sacandaga river enters Hudson river at Luzerne at elevation about 540 feet. The distance from Conklingville to Luzerne is about seven miles along the general course of the stream.

SACANDAGA RIVER AT CABLE STATION NEAR HADLEY, N. Y.

This station is located on the Sacandaga river about 1 mile about the mouth of the stream and 6 miles by river below the proposed dam at Conklingville. It was established November 12, 1910, to obtain data applicable to the proposed storage on this stream.

The river channel at this point was cleared of boulders to make the cross-section comparatively smooth and permanent, and a 5/8-inch galvanized wire rope, from which discharge measurements are made, was stretched across the stream.

About 30 feet downstream from the cable and on the left bank, a concrete well was built, 3 feet square, inside dimensions. The bottom of the well is about 2 feet below low water and 12 feet below ground surface; it is connected with the river by a 4-inch cast iron water pipe, 48 feet in length, having its intake end pointing downstream and protected by a fine wire screen. Inside of the well and securely bolted to the side is a bed plank, to which is fastened a staff gage with its zero at elevation 573.36, referred to a U. S. Geological Survey aluminum tablet set in the foundation wall of the Union Bag and Paper Company's mill at Hadley. On the top of the well is a concrete shelter 6 feet high and 3 feet square, inside dimensions, for protecting the recording gage.

Mean Daily Gage Height, in Feet, of Sacandaga River at Cable Station near Hadley, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	5.20	4.40	4.20	7.10	6.20	5.30	2.78	2.37	2.60	3.70	4.70	3.95
2.....	4.90	4.40	4.15	7.40	5.90	5.10	2.73	2.42	2.60	3.65	4.60	4.10
3.....	4.60	4.50	4.10	7.40	5.70	4.90	2.70	2.54	2.64	3.65	4.70	5.60
4.....	4.45	4.45	4.05	7.30	5.50	4.70	2.70	2.52	3.00	3.65	4.60	6.10
5.....	4.40	4.50	3.85	7.40	5.40	4.50	2.77	2.53	3.15	3.55	4.40	6.10
6.....	4.20	4.40	3.90	7.30	5.10	4.35	2.72	2.53	3.10	3.50	4.25	6.10
7.....	4.10	4.45	3.75	7.80	5.20	4.25	2.67	2.51	3.05	3.40	4.40	6.10
8.....	4.05	4.45	3.65	8.40	5.30	4.20	2.66	2.48	2.98	3.30	5.90	6.00
9.....	4.05	4.40	3.70	9.00	5.20	4.05	2.67	2.47	2.92	3.20	6.60	5.80
10.....	4.00	4.45	3.80	8.50	5.00	3.90	2.68	2.59	2.87	3.20	6.70	5.40
11.....	4.30	......	3.90	7.80	4.90	3.80	2.65	2.73	2.85	3.20	6.50	5.30
12.....	4.60	......	3.70	7.20	4.90	3.70	2.62	2.84	2.81	3.30	6.20	5.00
13.....	5.00	4.50	3.80	6.80	4.70	3.60	2.59	2.86	2.80	3.40	5.90	4.40
14.....	5.20	4.40	4.05	6.70	5.00	3.50	2.70	2.79	2.80	3.40	5.70	4.30
15.....	5.10	4.30	4.20	6.70	5.00	3.50	2.75	2.69	2.82	3.45	5.60	4.30
16.....	5.00	4.15	5.40	7.00	5.00	3.45	2.80	2.68	3.10	3.45	5.40	4.30
17.....	5.10	3.95	6.10	7.60	5.40	3.40	2.80	2.59	3.45	3.40	5.20	4.20
18.....	5.10	3.80	6.20	8.40	5.70	3.40	2.75	2.61	3.45	3.35	5.00	4.15
19.....	4.90	3.75	6.40	8.70	5.80	3.35	2.70	2.63	3.55	3.30	4.90	4.40
20.....	5.00	3.75	6.40	8.70	5.60	3.25	2.64	2.63	3.75	3.40	4.70	4.90
21.....	5.30	3.80	6.30	8.30	5.80	3.20	2.64	2.62	3.65	3.70	4.60	5.00
22.....	5.40	4.10	6.30	7.90	6.30	3.15	2.71	2.63	3.55	3.70	4.50	4.80
23.....	......	4.60	6.10	7.80	6.60	3.10	2.80	2.65	3.45	3.80	4.40	4.60
24.....	......	4.50	5.90	8.00	6.60	......	2.86	2.67	3.40	5.10	4.30	4.40
25.....	......	4.40	5.70	8.00	6.40	......	2.75	2.71	3.50	6.10	4.35	4.20
26.....	......	4.25	5.50	7.60	6.30	......	2.62	2.73	4.10	6.40	4.40	4.10
27.....	......	4.20	5.20	7.30	6.00	......	2.62	2.74	4.20	6.40	4.35	4.05
28.....	4.90	4.20	5.00	7.00	5.70	......	2.59	2.71	4.00	6.10	4.25	4.05
29.....	4.60	4.20	5.40	6.80	5.40	2.82	2.57	2.69	3.85	5.70	4.05	4.05
30.....	4.45	......	6.20	6.40	5.50	2.80	2.55	2.69	3.70	5.30	4.00	4.10
31.....	4.40	......	6.70	......	5.50	......	2.48	2.66	......	5.00	......	4.35

NOTE.— Relation of gage height to discharge was affected by ice, January 9 to April 3.

On days having little fluctuation in stage, the mean gage height was obtained by an inspection of the hydrograph traced by the gage; on days when the fluctuation was considerable, the mean gage height is the average of six readings during each 24-hour period.

Current-meter Discharge Measurements of Sacandaga River at Cable Station near Hadley, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Computed discharge.
1912.			*Sec.-ft.*
Jan. 18 *a*....	G. H. Canfield	5.08	774
Jan. 21 *b*....	Frank Weber	5.40	1,010
Feb. 7 *b*....	Frank Weber	4.43	580
Feb. 18......	Alexander McMillan	4.11	650
Mar. 8 *c*....	Frank Weber	3.62	537
Mar. 15 *c*....	Frank Weber	4.18	775
Mar. 22 *d*....	Frank Weber	6.16	3,710
Mar. 29 *d*....	Frank Weber	5.22	2,440
June 20......	G. H. Canfield	3.28	530
July 3......	G. H. Canfield	2.69	195
July 5......	G. H. Canfield	2.76	229
July 17......	O. W. Hartwell	2.80	275
Aug. 2 *e*.....	J. G. Mathers	2.40	104

a Made at boat section, one-half mile above cable, under partial ice cover.
b Made at highway bridge below cable, under partial ice cover.
c Made at boat section, under complete ice cover.
d Made from cable, partial ice cover.
e Made by wading about one-quarter mile above gage.

Mean Daily Discharge, Second-feet, of Sacandaga River at Cable Station near Hadley, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	2,890	580	750	7,470	5,080	3,080	254	95	176	864	2,050	1,110
2	2,370	580	722	8,430	4,360	2,710	232	111	176	821	1,900	1,270
3	1,900	600	695	8,430	3,900	2,370	218	153	193	821	2,050	3,680
4	1,700	590	670	8,180	3,470	2,050	218	146	366	821	1,900	4,840
5	1,630	600	580	8,480	3,270	1,760	250	149	455	738	1,630	4,840
6	1,380	580	600	8,180	2,710	1,570	227	149	424	698	1,440	4,840
7	1,270	590	545	9,680	2,890	1,440	205	142	395	622	1,630	4,840
8	1,220	590	518	11,500	3,080	1,380	201	131	355	552	4,360	4,600
9	1,220	580	530	13,300	2,890	1,220	205	128	323	486	6,120	4,130
10	1,000	590	560	11,800	2,540	1,060	210	172	297	486	6,400	3,270
11	920	593	600	9,680	2,370	956	197	232	288	486	5,850	3,080
12	840	597	530	7,880	2,370	864	184	283	268	552	5,080	2,540
13	750	600	560	6,690	2,050	778	172	292	263	622	4,360	1,630
14	850	580	670	6,400	2,540	698	218	258	263	622	3,900	1,500
15	795	565	750	6,400	2,540	698	240	214	273	660	3,680	1,500
16	750	722	2,160	7,280	2,540	660	263	210	424	660	3,270	1,500
17	795	622	3,540	9,080	3,270	622	263	172	660	622	2,890	1,380
18	795	560	3,760	11,500	3,900	622	240	180	660	587	2,540	1,330
19	710	545	4,200	12,400	4,130	587	218	189	738	552	2,370	1,630
20	750	545	4,200	12,400	3,680	519	193	189	910	622	2,050	2,370
21	915	560	3,980	11,200	4,130	486	193	184	821	864	1,900	2,540
22	990	695	3,970	9,980	5,330	455	222	189	738	864	1,760	2,210
23	943	1,060	3,650	9,680	6,120	424	263	197	660	956	1,630	1,900
24	897	960	3,350	10,300	6,120	395	292	205	622	2,710	1,500	1,630
25	850	880	3,050	10,300	5,590	366	240	222	698	4,840	1,570	1,380
26	803	780	2,770	9,080	5,330	339	184	232	1,270	5,590	1,630	1,270
27	756	750	2,360	8,180	4,600	312	184	236	1,380	5,590	1,570	1,220
28	710	750	2,100	7,280	3,900	297	172	222	1,160	4,840	1,440	1,220
29	620	750	2,760	6,690	3,270	273	165	214	1,010	3,900	1,220	1,220
30	590	......	4,760	5,590	3,470	263	157	214	864	3,080	1,160	1,270
31	580	......	6,220	......	3,470	......	131	201	......	2,540	......	1,570

NOTE.— Daily discharge, January 1 to 9 and April 4 to December 31, determined from a fairly well-defined rating curve.

Daily discharge, January 10 to April 3, estimated by means of numerous discharge measurements made during the period, climatological records and observer's notes.

Monthly Discharge of Sacandaga River at Cable Station near Hadley, N. Y.
[Drainage area, 1,060 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1912.					
January	*a* 3,140	*d* 580	1,070	1.01	1.16
February	*b* 1,150	*d* 545	655	0.618	0.67
March	*c* 6,900	*d* 518	2,130	2.01	2.32
April	13,400	5,590	9,110	8.59	9.58
May	6,150	2,050	3,710	3.50	4.04
June	3,270	263	975	0.92	1.03
July	302	131	213	0.201	0.23
August	302	95	191	0.18	0.21
September	1,480	176	571	0.539	0.60
October	5,620	486	1,570	1.48	1.71
November	6,540	1,160	2,700	2.55	2.84
December	4,960	1,110	2,360	2.23	2.57

a Occurred January 1, open water.
b Occurred February 23, ice conditions.
c Occurred March 20, ice conditions.
d From ice curves.

SCHROON RIVER.

SCHROON RIVER AT RIVERBANK, N. Y.

This station is located on the steel highway bridge near Riverbank post-office, between the towns of Warrensburg and Bolton, about 9 miles north of the village of Warrensburg and about 10 miles downstream from the outlet of Schroon lake. It was established September 23, 1907, by the N. Y. State Water Supply Commission in coöperation with the U. S. Geological Survey, to obtain general statistical data in regard to theflow of Schroon river.

There are several dams at the village of Warrensburg used for power purposes. During September, 1907, a timber crib dam was constructed at Starbuckville, about 6 miles above the gaging station, for storage purposes, this affording a head of some 8 feet and ponding water to Schroon lake. Tumble Head falls begin about 1 mile above the gaging station and extend upstream for about a mile farther, affording a total fall of some 30 feet.

The datum of the chain gage attached to the bridge has remained the same during the maintenance of the station. During the winter months the discharge is affected by ice conditions. Conditions for obtaining accurate discharge data are good and a very good rating curve has been developed. All measurements are made from the bridge.

Since 1907, the regimen of flow of Schroon river during the low-water season has been considerably affected by the storage held in Schroon lake.

Information in regard to this station is contained in the annual reports of the U. S. Geological Survey.

Mean Daily Gage-height, in Feet, of Schroon River at Riverbank, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	3.60	3.00	2.66	2.80	4.70	4.50	1.35	1.35	1.30	1.30	3.10	2.90
2.....	3.60	2.80	2.50	3.60	4.40	4.30	1.35	1.35	1.45	1.32	3.10	2.85
3.....	3.60	3.40	2.55	3.80	4.20	4.30	1.25	1.35	1.50	1.28	2.95	2.95
4.....	3.50	3.30	2.50	3.80	4.20	4.00	1.20	1.30	1.45	1.30	2.90	3.00
5.....	3.40	3.20	2.40	4.00	4.10	4.00	1.30	1.32	1.45	1.80	2.90	3.10
6.....	3.90	3.20	2.45	4.40	4.10	3.80	1.35	1.30	1.48	1.30	2.90	3.10
7.....	4.10	3.00	2.40	5.00	4.40	3.60	1.35	2.10	1.50	2.00	3.00	3.00
8.....	4.00	2.80	2.30	6.00	4.40	3.40	1.38	1.75	1.50	2.00	3.20	3.30
9.....	4.40	2.80	2.35	6.80	4.50	3.30	1.35	2.05	1.48	2.00	3.50	3.40
10.....	4.20	2.85	2.25	6.80	4.30	3.50	1.50	1.55	1.35	2.00	3.80	3.40
11.....	4.60	2.90	2.25	6.60	4.30	3.80	1.40	1.50	1.50	1.90	3.80	3.40
12.....	4.50	2.90	2.25	6.20	4.00	3.60	1.40	1.55	1.50	1.85	3.80	3.30
13.....	4.60	2.90	2.25	5.90	4.30	3.60	1.50	1.50	1.45	1.25	3.80	3.20
14.....	4.90	2.85	2.30	5.80	3.90	3.40	1.40	1.45	1.50	2.00	3.80	3.10
15.....	5.20	2.80	2.30	5.60	4.00	3.40	1.35	1.40	2.10	2.00	3.90	3.00
16.....	4.00	2.75	2.50	5.80	4.40	1.90	1.30	1.38	2.00	2.00	4.00	2.90
17.....	4.30	2.70	2.50	6.40	4.50	3.00	1.30	1.55	2.00	1.90	4.00	2.80
18.....	4.00	2.75	2.50	7.00	4.50	2.90	1.35	1.40	2.00	2.00	3.90	2.80
19.....	4.10	2.55	2.60	7.30	4.60	2.95	1.30	1.40	2.00	1.55	3.70	2.90
20.....	3.60	2.45	2.55	7.40	4.90	2.85	1.40	1.45	2.00	1.60	3.60	3.00
21.....	3.00	2.35	2.50	7.10	5.00	2.60	1.40	1.45	1.80	1.95	3.60	3.00
22.....	2.60	2.40	2.55	6.80	5.40	2.05	1.40	1.45	1.25	2.00	3.50	2.85
23.....	2.45	2.40	2.60	6.80	5.50	2.30	1.35	1.95	1.80	2.00	3.30	2.90
24.....	2.45	2.45	2.60	6.90	5.70	2.30	1.40	1.80	2.00	2.25	3.30	2.90
25.....	3.60	2.50	2.65	6.60	5.80	2.50	1.40	1.35	2.00	2.35	3.30	2.70
26.....	3.60	2.55	2.55	6.20	5.60	2.50	1.40	2.00	2.05	2.55	3.20	2.60
27.....	3.40	2.55	2.60	5.90	5.40	2.60	1.40	1.55	2.00	3.00	3.20	2.55
28.....	2.35	2.65	2.60	5.60	5.00	1.55	1.35	1.42	1.70	3.00	3.10	2.60
29.....	3.40	2.60	2.80	5.40	4.80	1.55	1.40	1.32	1.25	3.10	3.00	2.55
30.....	3.20	......	2.80	5.00	4.60	1.35	1.40	1.28	2.00	3.10	3.00	2.50
31.....	3.10	......	2.85	......	4.60	......	1.40	1.25	......	3.10	......	1.65

NOTE.— Relation of gage height to discharge was affected by ice, January 6 to March 26. Relation of gage height to discharge was affected by log jams, April 5 to 8 and May 7 to June 13.

Current-meter Discharge Measurements of Schroon River at Riverbank, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Computed discharge.
			Second-feet.
1912.			
Jan. 21 *a*	G. H. Canfield	3.60	5.46
Feb. 9 *b*	Frank Weber	2.80	3.94
Mar. 1 *b*	A. McMillan	2.66	3.30
June 7 *c*	Frank Weber	3.62	1,090
June 7 *c*	Frank Weber	3.61	1,090

a Measurement made under complete ice cover, 2,000 feet downstream from bridge.
b Made at regular section, under complete ice cover.
c Log jam below gage.

Mean Daily Discharge, Second-feet, of Schroon River at Riverbank, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	1,290	400	330	721	2,440	1,880	143	143	130	130	900	776
2	1,290	400	260	1,290	2,100	1,680	143	143	170	135	900	748
3	1,290	400	282	1,470	1,890	1,680	118	143	184	125	806	806
4	1,200	400	260	1,470	1,890	1,400	105	130	170	130	776	836
5	1,120	400	220	1,400	1,780	1,400	130	135	170	276	776	900
6	1,100	400	240	1,780	1,780	1,240	143	130	178	130	776	900
7	1,050	400	220	2,440	1,780	1,080	143	390	184	350	836	836
8	1,000	395	180	3,690	1,780	940	151	259	184	350	966	1,040
9	950	394	200	5,200	1,880	875	143	370	178	350	1,200	1,120
10	900	420	160	5,200	1,680	1,010	184	198	143	350	1,470	1,120
11	850	445	160	4,900	1,680	1,240	156	184	184	312	1,470	1,120
12	800	445	160	4,310	1,400	1,080	156	198	184	294	1,470	1,040
13	750	445	160	3,900	1,680	1,080	184	184	170	118	1,470	966
14	700	420	180	3,770	1,320	1,120	156	170	184	350	1,470	900
15	650	395	180	3,520	1,400	1,120	143	156	390	350	1,570	836
16	500	372	260	3,770	1,780	312	130	151	350	350	1,670	776
17	600	350	260	4,600	1,880	836	130	198	350	312	1,670	721
18	550	372	290	5,500	1,880	776	143	156	350	350	1,570	721
19	550	282	370	5,960	1,990	806	130	156	350	198	1,380	776
20	546	240	380	6,120	2,320	748	156	170	350	212	1,290	836
21	500	200	390	5,640	2,440	618	156	170	276	331	1,290	836
22	500	220	450	5,200	2,920	370	156	170	118	350	1,200	748
23	440	220	510	5,200	3,040	476	143	331	276	350	1,040	776
24	440	240	540	5,350	3,290	476	156	276	350	454	1,040	776
25	420	260	610	4,900	3,420	568	156	143	350	500	1,040	668
26	400	282	593	4,310	3,160	568	156	350	370	593	966	618
27	390	282	618	3,900	2,920	618	156	198	350	836	966	593
28	370	328	618	3,520	2,440	198	143	162	242	836	900	618
29	390	305	721	3,280	2,210	198	156	135	118	900	836	593
30	390	......	721	2,800	1,990	143	156	125	350	900	836	568
31	400	......	748	......	1,990	......	156	118	......	900	......	226

NOTE.— Daily discharge, January 1 to 5, April 9 to May 6 and June 14 to December 31, determined from a well-defined rating curve.

Daily discharge, January 6 to April 4, determined by means of a rating curve based on measurements made with ice present, observer's notes and climatologic records.

Daily discharge, April 5 to 8 and May 7 to June 13, determined from a fairly well-defined rating curve, based on measurements made during the existance of log jams.

Monthly Discharge of Schroon River at Riverbank, N. Y.
[Drainage area, 534 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1912.					
January	....	....	720	1.35	1.56
February	....	....	349	0.654	0.71
March	748	160	364	0.682	0.79
April	6,120	721	3,840	7.19	8.02
May	3,420	1,320	2,130	3.99	4.60
June	1,880	143	885	1.66	1.85
July	184	105	148	0.277	0.32
August	390	118	192	0.36	0.42
September	390	118	245	0.459	0.51
October	900	118	391	0.732	0.84
November	1,670	776	1,150	2.15	2.40
December	1,120	226	800	1.50	1.73

PRECIPITATION RECORDS.

Rain gages have been established by this Department at several places on the Upper Hudson drainage area: Precipitation records have been kept as follows:

Daily Precipitation, in Inches, at Troy, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1				0.04				0.08		0.06	0.05	
2	0.20			0.28						0.07	0.05	
3				0.80		0.95		0.17	1.70			0.05
4									0.02			
5	0.05			0.09		0.06						
6					0.57	0.24			0.04			0.15
7					0.04	0.25					0.05	
8		0.01		0.77							1.27	
9	0.20			0.06	0.07							
10				0.12	0.32		0.04	0.15		0.20		
11										0.45		
12	0.05					0.01	0.40		0.28	0.02		
13				0.01	0.27	0.01					0.02	
14					0.10					0.14	0.20	
15	0.04			0.08	0.10		0.24			0.01	0.17	
16	0.03			0.05	0.26				0.81			0.05
17					0.92							
18	0.05			0.10	0.10		1.60					0.02
19	0.28	0.04		0.16			0.13	0.46	0.13	0.10		0.40
20		0.16			0.18				0.15			0.06
21		0.02			0.10				0.10			
22		0.62			0.46		0.24	0.01				
23	0.06			0.13				0.33		0.50		
24	0.04							0.04	0.04	2.00		0.15
25				0.04	0.06				0.06	0.19	0.17	
26										0.12		0.05
27	0.04	0.62						0.85	0.07			0.35
28												0.32
29	0.09			0.47			0.35					
30	0.04				1.30		0.47		0.34			0.16
31	0.02				0.40		0.08					0.07

Daily Precipitation, in Inches, at Mechanicville, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1				0.25					0.75	0.05		
2				0.62		0.35		0.16	0.45			
3												
4	0.10			0.30		0.27						
5	0.10				0.35				0.40			0.43
6					0.07	0.45						
7				0.55				T		T	1.25	
8	0.25		0.10		0.08		T					
9			0.10	0.30	0.12			0.07		0.35		
10							0.04	0.77		0.48		
11				T			T	0.03	0.30			
12	T		1.43	0.07	0.11	T						
13				0.12	0.29		0.40				0.36	
14	0.20		0.30	0.03	0.04				0.04			
15	T		0.40	0.16	0 27	0.08	T		0.75			
16	T				0.75							0.05
17	0.10			0.17	T	T	0.08	0.73				
18	0.06			0.27			0.71	0.05	0.05			
19	0.10	0.22	T		T			T	0.35	0.17		0.40
20			0.30		0.05					0.10		0.10
21	T	0.50	0.30		0.40	0.03	0.50	0.33				
22	T	T		0.24				T		0.25		
23	T		0.68	T				0.18		1.85	T	T
24			T	0.21	T				0.13	0.55	0.58	0.03
25									0.05	0.15	T	0.70
26		0.80		0.04				0.40		T		0.35
27	T						0.45					T
28	0.20		0.55				0.05					
29	0.37		0.25	0.38	0.95				0.43			0.01
30					0.50		0.03					0.32
31			T		0.05			T				

T means trace.

Daily Precipitation, in Inches, at Hoosick Falls, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	0.12	0.04		0.12		0.05		0.16	T	0.08	0.07	
2				0.26				0.05	0.28	0.31		
3		T		0.74	0.02	0.45		0.31	0.32			0.20
4									0.15	0.03		
5	0.09			0.12		0.46	0.13					
6					0.37				0.20			0.58
7		0.07			0.12	0.32			0.02		0.02	
8				0.90						0.04	0.81	
9	0.04		0.21		0.09						0.04	
10			0.09	0.12	0.21			0.02		0.50	0.05	
11								0.58		0.45		
12	T				0.01		T		0.20	0.11		
13			1.40	0.03	0.03	0.04				0.07	0.06	T
14			0.06	0.05	0.12		0.45				0.32	
15	0.09		0.14	0.04	0.14		0.05	0.03	0.34			
16	0.20		0.51	0.02	0.09	0.03	0.01		0.97			0.02
17	0.08				0.87	0.04						
18	0.12			0.12	0.20			0.62				0.02
19	0.65	T		0.23			1.40	0.18	0.15	0.06		0.40
20	0.33	0.17	0.01	0.05	0.02				0.87	0.07		0.30
21			0.18		0.15		0.02					T
22	T	0.37	0.21		0.32	0.06	0.36					
23	0.13		0.01	0.25				0.04		0.02		
24	0.04		0.62	0.12				0.40	0.10	2.50		T
25			0.22	0.18	0.47					0.60	0.08	0.30
26					T		0.11			0.15	0.12	T
27	T	0.74		0.08				0.42	0.11			0.07
28								T	0.05			0.33
29	0.17		0.46									
30	0.12		0.23	0.31	1.10		0.26		0.42			0.58
31	0.05				0.40		0.02					

T means trace.

Daily Precipitation, in Inches, at Glens Falls, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	......	......	......	......	......	......	......	......	0.30	0.10	0.36	......
2	......	......	......	0.97	......	0.11	......	0.40	0.31	......	......	0.60
3	......	......	......	......	......	......	......	......	......	......	......	......
4	0.06	......	......	0.05	......	0.03	0.01	......	......	......	......	......
5	......	......	......	......	......	......	......	......	0.04	......	......	0.38
6	......	......	......	......	0.36	0.02	......	......	......	......	......	......
7	......	......	......	0.34	......	......	......	0.04	......	......	......	......
8	0.39	......	......	......	......	......	0.05	......	......	......	2.36	......
9	......	......	0.24	0.20	0.09	......	0.24	......	......	0.12	......	......
10	......	......	......	......	......	......	......	0.74	......	......	......	......
11	......	......	......	......	......	......	1.46	0.02	0.41	......	......	......
12	......	......	......	......	0.09	0.02	......	......	......	0.51	......	......
13	......	......	1.11	......	0.65	......	0.37	......	......	......	......	......
14	......	......	......	......	......	......	......	......	......	......	0.66	......
15	0.20	......	1.67	......	......	0.08	......	0.32	2.86	......	......	0.03
16	......	......	......	0.37	0.72	......	......	......	......	......	......	......
17	0.07	......	......	......	0.04	......	......	......	......	......	......	......
18	0.05	......	......	......	......	......	0.24	0.88	......	......	......	......
19	0.33	0.04	0.03	0.63	......	......	......	0.02	1.66	0.24	......	0.87
20	......	0.09	......	......	0.78	......	......	......	......	......	......	......
21	......	......	0.40	......	0.34	......	1.15	0.06	......	......	......	......
22	......	0.88	......	0.31	......	......	......	0.37	......	......	......	......
23	0.21	......	......	......	......	......	......	0.09	0.12	2.36	......	......
24	0.02	......	0.63	0.07	......	......	......	0.03	......	1.21	......	0.17
25	......	......	......	......	0.02	......	......	......	0.11	0.25	0.66	......
26	......	......	0.07	......	......	......	......	0.31	......	......	......	......
27	0.05	1.00	......	......	......	......	......	......	......	......	......	0.32
28	......	......	......	......	1.50	......	......	......	......	......	......	......
29	......	......	0.83	0.22	......	......	0.23	......	0.26	......	......	......
30	0.59	......	......	......	......	......	0.12	......	......	......	......	0.85
31	0.12	......	1.10	......	0.35	......	0.04	......	......	......	......	......

Daily Precipitation, in Inches, at Corinth, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	......	......	......	0.18	......	......	......	......	......	......	......	......
2	......	......	......	0.50	......	......	......	......	......	0.15	......	......
3	......	......	......	0.55	......	0.10	......	......	0.40	......	......	1.05
4	......	......	......	......	......	......	0.03	......	......	......	......	......
5	0.06	......	......	0.05	......	......	......	......	......	......	......	......
6	......	......	......	......	0.20	......	......	......	0.07	......	......	0.32
7	......	......	......	......	0.17	......	......	......	......	......	0.28	......
8	0.31	......	0.15	0.24	......	......	......	......	......	......	2.10	......
9	......	......	......	......	......	......	0.05	......	......	......	......	......
10	......	......	......	0.15	......	......	0.20	0.15	......	......	......	......
11	......	......	......	......	......	......	......	1.30	......	0.16	......	......
12	......	......	......	......	0.12	......	......	......	0.68	......	......	......
13	......	......	1.08	......	0.12	0.05	0.90	......	......	0.08	0.10	......
14	......	......	......	......	0.52	......	......	......	......	......	0.30	......
15	0.10	......	0.58	0.35	......	......	......	......	......	......	0.27	......
16	0.04	......	1.14	0.20	......	0.16	......	......	2.30	......	......	......
17	......	......	......	......	0.65	......	......	......	......	......	......	......
18	0.10	......	......	0.18	0.20	......	0.25	0.60	0.65	......	......	......
19	0.51	......	......	0.68	......	......	......	0.05	......	0.20	......	0.48
20	......	0.32	0.02	......	......	......	1.20	......	0.72	......	......	......
21	......	......	0.20	......	0.82	......	......	......	......	......	......	......
22	......	1.10	0.31	......	0.50	......	......	......	......	......	......	......
23	0.25	......	......	0.56	......	......	......	0.25	......	0.25	......	......
24	0.50	......	0.68	......	......	......	......	......	0.15	2.30	......	......
25	......	......	0.06	......	......	......	......	......	......	0.88	0.76	......
26	......	......	......	......	......	......	......	0.50	0.12	0.17	......	......
27	......	1.20	0.12	......	......	......	......	......	......	......	......	......
28	......	......	......	0.40	......	......	......	......	......	......	......	......
29	0.30	......	0.55	......	2.70	......	0.30	......	......	......	......	......
30	0.50	......	0.57	......	......	......	......	......	0.24	......	......	0.92
31	......	......	......	......	0.34	......	......	......	......	......	......	......

Daily Precipitation, in Inches, at Northville, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1				0.56							0.66	
2				0.54		0 22		0.38	0.35			1.22
3										0.15		
4									1.14			
5	0.15				0.16				0.13			
6					0.30	0.18						0.28
7		0.10		0.21								
8	0.50										1.98	
9				0.12				0.32				
10								1.50		0.06		
11							0.21	0.10	0.21	0.37		
12			0.92		0.46	0.13				0.03		
13							0.72				0.38	
14			0.43	0.25								
15	0.16		0.80			0.15	0.40		1.12			
16					1.00							
17	0.12			0.28								
18	0.40			0.48				0.55	1.40			
19	0.10	0.36							0.42	0.21		0.85
20			0.17		0.80							
21		1.13	0.26		0.41		1.00	0.48				
22	0.30	0.12		0.59				0.21				
23									0.28			
24			0.71		0.15					0.79		0.16
25									0.48	0.90	0.82	
26		1.10	0.20	0.10				0.26	0.15	0.06		
27	0.08											
28			0.80									
29			0.30	0.30	0.69				0.28			
30	0.30											0.89
31	0.60		0.22									

DELAWARE RIVER DRAINAGE BASIN.

DESCRIPTION OF THE DELAWARE RIVER.

The head waters of Delaware river rise in Delaware, Greene and Schoharie counties, N. Y., the source of the main stream, which is commonly known as West branch, to distinguish it from the smaller East or Pepacton branch, being a small lake almost on the line of Schoharie and Delaware counties, at an elevation of 1,886 feet above tide. From this lake it flows southwestward across central Delaware county to Deposit, where it receives Oquaga creek, a large tributary draining eastern Broome county, and turns abruptly to the southeast, forming the boundary line between New York and Pennsylvania until Port Jervis is reached. Here it turns again to the southwest and flows for a distance of about 40 miles along the base of the Shawangunk range until it passes through the water gap, from which point it flows irregularly southward to Trenton. Below Trenton the course is in general southwestward to Delaware Bay. South of Port Jervis it forms the dividing line between Pennsylvania and New Jersey, and for a few miles it is the boundary between Delaware and New Jersey.

East branch rises at Grand Gorge in northeastern Delaware county, and flows parallel to West branch across southern Delaware county, uniting with the latter stream at Hancock.

The total length of the river from the mouth to the head of West branch is about 410 miles; its drainage area, measured at Philadelphia and including Schuylkill river, is 10,100 square miles, of which about 2,580 square miles lie in New York, 5,750 in Pennsylvania, and 1,800 in New Jersey. The river is tidal to Trenton, which lies also at the head of navigation.

DELAWARE RIVER AT PORT JERVIS, N. Y.

This station is located at the toll bridge over the Delaware river at Port Jervis. It was established for the United States Weather Bureau by Irving Righter, City Engineer, Port Jervis, N. Y., October 12, 1904.

This station is maintained for the purpose of flood predictions by the Weather Bureau and the records of gage heights are supplied to the Geological Survey for the purpose of determining the regimen of flow of the upper Delaware drainage.

Mongaup river enters the Delaware from the north about 6 miles above the station and Neversink river, also from the north, enters about one mile below the station.

The river section is affected by ice to a greater or less extent each winter.

Considerable difficulty has been experienced in maintaining the datum of the chain gage constant. On September 4, 1908, a careful investigation was made and in order to avoid negative readings a change in the original datum of about 2 feet, as nearly as it could be determined, was made. The new chain length set on this date was 36.47 feet from rivet marker to the end of the weight. The relation between the gage datum and the following bench-marks was determined:

Port Jervis city bench-mark, from which the gage was originally established, is a cross located on the door-sill of the schoolhouse on Thompson street near Water street. Elevation above gage datum is 27.75 feet.

Bench-mark No. 2 is top of downstream left corner of pier of toll bridge. Elevation above gage datum, 29.92 feet.

Bench-mark No. 3 is top of right abutment of toll bridge at apex of angle caused by junction of downstream wing-wall. Elevation above gage datum, 29.02 feet. The elevation of the datum of the gage is 414.89 feet above mean sea level.

Conditions of flow at this point are constant and a good rating table has been developed for low and medium stages. Careful comparisons of this station with the Riegelsville and the two Hancock stations indicate that the corrections applied to the gage heights were essentially correct and that the discharge data can be fully relied on.

Mean Daily Gage Height, in Feet, of Delaware River at Port Jervis, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	3.9	......	......	7.5	6.2	3.2	1.5	1.4	2.0	2.9	4.6	3.0
2	3.9	......	......	7.8	5.6	3.3	1.5	1.3	2.3	2.7	3.5	2.9
3	3.7	......	......	10.2	5.2	3.5	1.4	1.3	3.3	2.6	3.7	3.2
4	3.4	......	......	8.7	4.8	3.2	1.4	1.3	3.3	2.6	3.7	6.8
5	3.3	......	......	7.2	4.6	3.1	1.2	1.2	3.0	2.5	3.3	6.0
6	2.9	......	......	6.4	4.2	2.9	1.4	1.1	3.0	2.3	3.2	5.0
7	2.7	......	......	6.3	4.4	3.5	1.3	1.3	2.8	2.2	3.0	6.1
8	2.5	......	......	7.2	4.4	3.1	1.4	1.3	2.6	2.2	3.4	5.5
9	2.7	......	......	7.5	5.0	2.9	1.3	1.4	2.5	2.1	5.9	5.0
10	2.7	......	......	6.3	4.9	2.7	1.3	1.4	2.4	2.1	5.1	4.6
11	3.0	......	......	5.8	4.6	2.6	1.3	3.2	2.2	2.1	4.8	4.3
12	3.0	......	......	5.5	4.5	2.5	1.2	2.5	1.8	2.1	4.6	4.1
13	......	......	......	5.2	4.2	2.4	1.5	2.9	1.8	2.1	4.0	3.9
14	......	......	6.0	5.3	4.1	2.3	1.4	2.5	1.7	2.0	3.9	3.6
15	......	......	6.3	5.0	4.0	2.3	1.3	2.2	1.6	2.1	3.9	3.3
16	......	......	10.2	5.4	3.8	2.3	1.6	2.0	1.5	2.0	3.6	3.0
17	......	......	9.1	7.8	4.8	2.3	1.6	2.0	1.9	2.0	3.5	3.5
18	......	......	7.6	7.1	5.1	2.2	2.0	2.1	2.0	1.9	3.3	3.3
19	......	......	7.6	8.2	4.8	2.2	2.0	2.3	2.0	1.9	3.1	3.4
20	......	......	7.3	8.1	4.5	2.1	2.3	2.5	2.1	1.9	3.0	4.8
21	......	......	7.2	7.8	4.1	2.0	1.8	2.4	2.2	1.9	3.0	4.3
22	......	......	6.0	6.1	3.9	2.0	1.8	2.3	2.2	1.9	3.0	4.3
23	......	......	5.7	5.7	3.9	1.9	1.8	2.6	2.0	2.0	2.9	3.9
24	......	......	5.3	5.6	3.6	1.8	1.6	2.8	2.0	4.8	2.8	3.7
25	......	......	5.2	5.1	3.6	1.8	1.6	3.1	3.2	7.5	3.2	3.7
26	......	......	5.0	4.9	3.5	1.7	1.5	3.0	4.3	6.5	3.6	3.5
27	......	......	4.5	4.7	3.3	1.6	1.4	2.8	4.0	5.4	3.5	3.5
28	......	......	4.6	4.6	3.0	1.6	1.3	2.5	3.7	4.8	3.4	3.7
29	......	......	6.3	4.4	2.8	1.5	1.3	2.4	3.3	4.5	3.3	3.5
30	......	......	10.6	7.0	3.1	1.5	1.4	2.3	3.2	4.2	3.1	3.4
31	......	......	8.2	......	3.3	......	1.4	2.1	......	4.4	......	4.3

NOTE.— Relation of gage height to discharge was affected by ice, January 13 to March 13.

Current-meter Discharge Measurements of Delaware River at Port Jervis, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Computed discharge.
1912.			*Sec.-ft.*
July 29 *a*	Frank Weber	1.36	557
Nov. 22	Frank Weber	3.01	2,880

a Made by wading.

Mean Daily Discharge, Second-feet, of Delaware River at Port Jervis, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	5,440	......	......	23,900	15,700	3,320	665	590	1,150	2,650	8,100	2,860
2	5,440	......	......	26,000	12,500	3,580	665	520	1,570	2,260	4,150	2,650
3	4,770	......	......	44,400	10,700	4,150	590	520	3,580	2,080	4,770	3,320
4	3,860	......	......	32,700	8,930	3,320	590	520	3,580	2,080	4,770	19,200
5	3,580	......	......	21,800	8,100	3,080	450	450	2,860	1,900	3,580	14,600
6	2,650	......	......	16,800	6,530	2,650	590	390	2,860	1,570	3,320	9,780
7	2,260	......	......	16,200	7,300	4,150	520	520	2,450	1,420	2,860	15,100
8	1,900	......	......	21,800	7,300	3,080	590	520	2,080	1,420	3,860	12,100
9	2,260	......	......	23,900	9,780	2,650	520	590	1,900	1,280	14,100	9,780
10	2,260	......	......	16,200	9,350	2,260	520	590	1,730	1,280	10,200	8,100
11	2,860	......	......	13,500	8,100	2,080	520	3,320	1,420	1,280	8,930	6,910
12	2,860	......	......	12,100	7,700	1,900	450	1,900	920	1,280	8,100	6,160
13	......	......	......	10,700	6,530	1,730	665	2,650	920	1,280	5,800	5,440
14	......	......	14,600	11,100	6,160	1,570	590	1,900	825	1,150	5,440	4,450
15	......	......	16,200	9,780	5,800	1,570	520	1,420	740	1,280	5,440	3,580
16	......	......	44,400	11,600	5,100	1,570	740	1,150	665	1,150	4,450	2,860
17	......	......	35,800	26,000	8,930	1,570	740	1,150	1,030	1,150	4,150	4,150
18	......	......	24,600	21,200	10,200	1,420	1,150	1,280	1,150	1,030	3,580	3,580
19	......	......	24,600	29,000	8,930	1,420	1,150	1,570	1,150	1,030	3,080	3,860
20	......	......	22,500	28,200	7,700	1,280	1,570	1,900	1,280	1,030	2,860	8,930
21	......	......	21,800	26,000	6,160	1,150	920	1,730	1,420	1,030	2,860	6,910
22	......	......	14,600	15,100	5,440	1,150	920	1,570	1,420	1,030	2,860	6,910
23	......	......	13,000	13,000	5,440	1,030	920	2,080	1,150	1,150	2,650	5,440
24	......	......	11,100	12,500	4,450	920	740	2,450	1,150	8,930	2,450	4,770
25	......	......	10,700	10,200	4,450	920	740	3,080	3,320	23,900	3,320	4,770
26	......	......	9,780	9,350	4,150	825	665	2,860	6,910	18,400	4,450	4,150
27	......	......	7,700	8,510	3,580	740	590	2,450	5,800	11,600	4,150	4,150
28	......	......	8,100	8,100	2,860	740	520	1,900	4,770	8,930	3,860	4,770
29	......	......	16,200	7,300	2,450	665	520	1,730	3,580	7,700	3,580	4,150
30	......	......	47,600	20,500	3,080	665	590	1,570	3,320	6,530	3,080	3,860
31	......	......	29,000	......	3,580	......	590	1,280	......	7,300	......	6,910

NOTE.— Daily discharge determined from a well-defined rating curve.

Monthly Discharge of Delaware River at Port Jervis, N. Y.
[Drainage area, 3,250 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1912.					
April	44,400	7,300	18,200	5.60	6.25
May	15,700	2,450	7,000	2.15	2.48
June	4,150	665	1,910	0.588	0.66
July	1,570	450	694	0.214	0.25
August	3,320	390	1,490	0.458	0.53
September	6,910	665	2,220	0.683	0.76
October	23,900	1,030	4,040	1.24	1.43
November	14,100	2,450	4,830	1.49	1.66
December	19,200	2,650	6,590	2.03	2.34

EAST BRANCH, DELAWARE RIVER, AT HANCOCK, N. Y.

This station was established October 14, 1902, by Robert E. Horton, and has since been maintained by the U. S. Geological Survey in coöperation with this Department. It is located at the highway bridge one-half mile southeast of the Erie railroad station at Hancock, N. Y., and one mile above the junction with West branch of the Delaware. The Erie railroad bridge is just below the station.

The channel is straight for 600 feet above and 300 feet below the station. The current is swift. Both banks are of medium height and are not liable to overflow. The bed of the stream is composed of rocks and gravel. There are three channels at low water and five channels at high water. During low water the elevation of the water-surface at the station is lower than the water surface on West branch of the Delaware, but the gage heights are probably not affected by backwater from West branch, as there is considerable fall between the gaging station and the junction of the branches.

Discharge measurements are made from the downstream side of the five-span iron highway bridge to which the gage is attached. The bridge has a total span of 425.5 feet between abutments. The initial point for soundings is the face of the right abutment at the top.

A standard chain gage is attached to the lower chord of the second span from the left end of the bridge on the upstream side. It was installed July 21, 1903, to replace the old wire gage. The gage datum was not changed. The length of the chain from the end of the weight to the marker is 32.43 feet. The gage is read twice each day by D. B. Van Etten. The bench-mark is a circular chisel draft on the top of the left abutment on the downstream side. It is marked "B. M." Its elevation is assumed to be 100.00. The elevation of the top of the gage pulley is 104.47. The elevation of water-surface, when the gage reads zero, is 72.07.

Mean Daily Gage Height, in Feet, of East Branch, Delaware River, at Hancock, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	4.2	4.5	5.0	6.9	5.1	3.6	2.7	2.8	3.2	3.2	3.8	3.5
2.....	3.9	4.5	4.8	6.9	4.8	3.5	2.7	2.7	3.5	3.3	4.2	3.5
3.....	4.0	4.4	4.7	10.0	4.6	3.5	2.6	2.7	3.8	3.2	4.0	6.7
4.....	4.5	4.4	4.6	7.1	4.4	3.6	2.6	2.7	3.8	3.2	3.8	5.6
5.....	4.2	4.3	4.6	6.0	4.3	3.5	2.6	2.7	3.6	3.1	3.7	5.2
6.....	3.7	4.3	4.5	5.9	4.2	3.4	2.6	2.7	3.5	3.1	3.7	5.0
7.....	3.8	4.3	4.4	6.3	4.3	3.6	2.6	2.6	3.5	3.1	3.7	5.6
8.....	3.9	4.3	4.4	7.6	4.2	3.6	2.6	2.5	3.4	3.0	5.9	5.2
9.....	4.9	4.2	4.6	6.3	4.4	3.4	2.6	2.5	3.3	3.0	5.3	4.9
10.....	4.8	4.2	4.8	5.7	4.4	3.3	3.0	2.7	3.3	3.0	4.9	4.6
11.....	4.8	4.1	4.6	5.4	4.2	3.3	2.9	4.4	3.2	3.1	4.6	4.4
12.....	4.8	4.1	4.4	5.1	4.0	3.2	2.9	3.8	3.2	3.1	4.5	4.3
13.....	4.6	4.1	4.8	5.2	4.2	3.2	2.8	3.4	3.2	3.1	4.3	4.0
14.....	4.6	4.1	5.6	5.0	4.1	3.2	2.9	3.3	3.1	3.0	4.2	4.0
15.....	4.6	4.1	5.1	4.9	4.0	3.1	3.0	3.1	3.0	3.0	4.2	4.0
16.....	4.6	4.1	10.9	7.4	4.0	3.1	2.9	3.1	3.2	3.0	4.0	3.9
17.....	4.5	4.1	6.9	7.3	5.0	3.1	2.8	3.0	3.2	2.9	3.9	3.8
18.....	4.5	4.2	6.6	6.8	4.9	3.1	3.4	3.1	3.1	2.9	3.8	3.7
19.....	4.7	4.2	6.7	7.5	4.6	3.0	3.5	3.3	3.1	2.9	3.7	4.0
20.....	4.9	4.2	6.7	6.7	4.5	3.0	3.2	3.4	3.2	3.0	3.7	5.0
21.....	5.0	4.3	6.6	5.9	4.4	2.9	3.0	3.3	3.1	3.0	3.6	4.5
22.....	4.9	4.9	5.5	5.4	4.2	2.9	3.1	3.8	3.0	3.0	3.6	4.3
23.....	4.9	5.6	4.9	5.3	4.2	2.9	3.0	3.9	3.0	3.0	3.5	4.2
24.....	4.8	5.3	4.9	5.1	4.0	2.9	2.9	4.3	3.1	6.1	3.5	4.2
25.....	4.7	5.2	4.7	5.2	4.0	2.9	2.8	3.9	3.4	5.9	3.9	4.2
26.....	4.7	5.3	4.3	4.8	3.8	2.8	2.8	4.0	3.5	5.1	3.9	4.0
27.....	4.7	5.4	4.3	4.7	3.7	2.8	2.8	3.8	3.4	4.7	3.7	4.0
28.....	4.7	5.8	5.5	4.7	3.6	2.8	2.7	3.6	3.3	4.4	3.7	3.9
29.....	4.6	5.4	7.8	4.5	3.5	2.7	2.7	3.5	3.2	4.3	3.6	4.0
30.....	4.6	......	7.8	5.6	3.9	2.7	2.8	3.5	3.2	4.1	3.6	4.0
31.....	4.6	......	6.3	......	3.8	......	2.8	3.3	......	3.9	......	5.4

NOTE.— Relation of discharge to gage height was affected by ice, January 9 to March 15.

Current-meter Discharge Measurements of East Branch, Delaware River, at Hancock, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Computed discharge.
1912.			*Sec.-ft.*
Feb. 22 *a*.........	C. S. DeGolyer....................................	5.14	1,270
July 27 *b*.........	Frank Weber....................................	2.78	228
Nov. 20.........	Frank Weber....................................	3.69	1,060
Nov. 22..........	Frank Weber....................................	3.58	910

a Measurement made under complete ice cover. *b* Measurement made by wading at regular section.

Mean Daily Discharge, Second-feet, of East Branch, Delaware River, at Hancock, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	1,880	......	......	8,810	3,750	940	190	240	520	520	1,220	820
2	1,380	......	......	8,810	3,070	820	190	190	820	610	1,880	820
3	1,540	......	......	19,800	2,640	820	144	190	1,220	520	1,540	8,170
4	2,440	......	......	9,470	2,250	940	144	190	1,220	520	1,220	4,990
5	1,880	......	......	6,070	2,060	820	144	190	940	440	1,070	3,990
6	1,070	......	......	5,790	1,880	710	144	190	820	440	1,070	3,520
7	1,220	......	......	6,930	2,060	940	144	144	820	440	1,070	4,990
8	1,380	......	......	11,100	1,880	940	144	104	710	370	5,790	3,990
9	......	......	......	6,930	2,250	710	144	104	610	370	4,230	3,290
10	......	......	......	5,250	2,250	610	370	190	610	370	3,290	2,640
11	......	......	......	4,480	1,880	610	300	2,250	520	440	2,640	2,250
12	......	......	......	3,750	1,540	520	300	1,220	520	440	2,440	2,060
13	......	......	......	3,990	1,880	520	240	710	520	440	2,060	1,540
14	......	......	......	3,520	1,710	520	300	610	440	370	1,880	1,540
15	......	......	......	3,290	1,540	440	370	440	370	370	1,880	1,540
16	......	......	23,300	10,500	1,540	440	300	440	520	370	1,540	1,380
17	......	......	8,810	10,100	3,520	440	240	370	520	300	1,380	1,220
18	......	......	7,850	8,490	3,290	440	710	440	440	300	1,220	1,070
19	......	......	8,170	10,800	2,640	370	820	610	440	300	1,070	1,540
20	......	......	8,170	8,170	2,440	370	520	710	520	370	1,070	3,520
21	......	......	7,850	5,790	2,250	300	370	610	440	370	940	2,440
22	......	......	4,730	4,480	1,880	300	440	1,220	370	370	940	2,060
23	......	......	3,290	4,230	1,880	300	370	1,380	370	370	820	1,880
24	......	......	3,290	3,750	1,540	300	300	2,060	440	6,350	820	1,880
25	......	......	2,850	3,990	1,540	300	240	1,380	710	5,790	1,380	1,880
26	......	......	2,060	3,070	1,220	240	240	1,540	820	3,750	1,380	1,540
27	......	......	2,060	2,850	1,070	240	240	1,220	710	2,850	1,070	1,540
28	......	......	4,730	2,850	940	240	190	940	610	2,250	1,070	1,380
29	......	......	11,800	2,440	820	190	190	820	520	2,060	940	1,540
30	......	......	11,800	4,990	1,380	190	240	820	520	1,710	940	1,540
31	......	......	6,930	......	1,220	......	240	610	......	1,380	......	4,480

NOTE.— Daily discharge determined from a well-defined rating curve.

Monthly Discharge of East Branch, Delaware River, at Hancock, N. Y.
[Drainage area, 840 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1912.					
January	....	....	1,240	1.48	1.71
February	....	....	1,010	1.20	1.29
March	23,300	....	4,660	5.55	6.40
April	19,800	2,440	6,480	7.71	8.60
May	3,750	820	1,990	2.37	2.73
June	940	190	517	0.615	0.69
July	820	144	288	0.343	0.40
August	2,250	104	714	0.850	0.98
September	1,220	370	620	0.738	0.82
October	6,350	300	1,150	1.37	1.58
November	5,790	820	1,660	1.98	2.21
December	8,170	820	2,490	2.96	3.41

NOTE.— The drainage area given above was computed from U. S. Post Route maps and is more reliable than the figures formerly published. The former value was 920 square miles.

Discharge from January 9 to March 15 is estimated from one discharge measurement made during this period, climatologic records and comparative run-off. It is assumed that the ice caused one foot of backwater during nearly the whole frozen season.

Mean discharge, January 9–31, estimated at 1,130 second-feet. Mean discharge, March 1-15, estimated at 1,790 second-feet.

EAST BRANCH, DELAWARE RIVER, AT FISH EDDY, N. Y.

This station was established in November, 1912, by the U. S. Geological Survey in coöperation with this Department. It is located at the highway bridge, 500 feet northwest of the N. Y.,

O. & W. R. R. station in the village of Fish Eddy, N. Y., and 5½ miles above the junction of the east and west branches of the Delaware river at Hancock, N. Y.

A high-water, vertical, staff gage is attached to the downstream side of the right-hand abutment of the highway bridge and a low-water gage of the same type is attached to one of the piers of the railroad bridge about 150 feet downstream from the highway bridge.

Mean Daily Gage Height, in Feet, of East Branch, Delaware River, at Fish Eddy, N. Y.

DAY.	Nov.	Dec.
1912.		
1	......	3.30
2	......	3.40
3	......	7.96
4	......	6.49
5	......	5.66
6	......	6.66
7	......	6.62
8	......	5.80
9	......	5.34
10	......	5.02
11	......	4.79
12	......	3.84
13	......	3.68
14	......	3.51
15	......	4.00
16	......	3.94
17	......	3.79
18	......	3.31
19	3.65	5.24
20	3.59	5.28
21	3.48	4.88
22	3.40	4.48
23	3.30	4.34
24	3.33	4.31
25	4.06	4.20
26	3.82	3.95
27	3.67	3.84
28	3.55	3.81
29	3.46	3.90
30	3.38	3.72
31	......	6.10

Current-meter Discharge Measurement of East Branch, Delaware River, at Fish Eddy, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Computed discharge.
1912.			*Sec.-ft.*
Nov. 20	Frank Weber	3.59	1,050

WEST BRANCH, DELAWARE RIVER, AT HANCOCK, N. Y.

This station was established October 15, 1902, by Robert E. Horton, and has since been maintained by the U. S. Geological Survey in coöperation with this Department. It is located one-half mile west of the Erie railroad station at Hancock, N. Y., and about one mile above the mouth of east branch.

The channel is straight for 400 feet above and 800 feet below the bridge. The current is swift. Both banks are high and rocky and are not subject to overflow. The bed of the stream is composed of earth and cobblestones.

Discharge measurements are made from the downstream side of the bridge, at which the gage is located. The bridge has a single span of 235 feet. The initial point for soundings is the top of the face of the left abutment on the downstream side. The bridge floor is marked at intervals of five feet with black paint.

The original wire gage was attached to the upstream side of the bridge. It was replaced July 20, 1903, by a standard chain gage. The location and the gage datum were not changed. The length of the chain from the end of the weight to the marker is 30.44 feet. The gage is read twice each day by David Pulver, the collector of tolls at the bridge. The bench-mark is a circular chisel draft on the upstream corner of the left abutment. Its elevation is assumed at 100.00. The elevation of the top of the pulley is 106.29. The elevation of water-surface, when the gage reads zero, is 75.75.

Mean Daily Gage Height, in Feet, of West Branch, Delaware River, at Hancock, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	4.0	4.0	5.5	7.2	4.5	3.5	2.4	2.5	3.0	3.5	3.5	3.3
2.....	3.4	4.0	5.6	7.2	4.6	3.3	2.6	2.5	4.3	3.5	4.1	3.5
3.....	3.6	3.9	5.6	8.2	4.4	3.5	2.4	2.5	3.9	3.3	3.9	6.2
4.....	3.5	3.9	5.4	6.6	4.2	3.5	2.5	2.5	3.7	3.3	3.6	5.7
5.....	3.5	3.9	5.1	6.1	4.1	3.5	2.5	2.5	3.5	3.2	3.5	5.3
6.....	2.9	3.7	5.4	6.0	4.0	3.5	2.5	2.5	3.4	3.1	3.5	5.5
7.....	3.4	3.7	5.2	6.1	4.1	3.6	2.5	2.5	3.3	3.1	3.5	5.6
8.....	4.0	3.8	5.1	7.2	4.1	3.5	2.5	2.5	3.2	3.0	6.9	5.1
9.....	4.6	3.6	6.0	6.1	4.2	3.4	2.5	2.5	3.2	2.9	5.9	4.7
10.....	4.7	3.6	6.0	5.7	4.1	3.2	2.5	2.5	3.0	3.0	5.3	4.2
11.....	4.7	3.5	5.6	5.5	3.9	3.1	2.5	3.4	2.9	3.0	4.9	4.3
12.....	4.7	3.5	5.2	5.3	3.8	3.2	2.6	3.1	3.0	3.1	4.6	4.0
13.....	4.6	3.6	7.2	5.5	3.8	3.0	2.5	2.9	3.0	3.0	4.4	3.6
14.....	4.4	3.7	10.8	5.2	3.7	3.0	2.6	2.9	2.9	3.0	4.4	3.5
15.....	4.7	3.5	5.5	5.0	3.7	3.0	2.6	2.8	2.9	2.9	4.2	3.9
16.....	4.5	3.5	10.0	7.6	3.6	3.0	2.6	2.8	2.9	2.9	4.0	3.8
17.....	4.5	3.6	6.8	7.0	4.2	3.1	2.5	2.7	2.9	2.9	4.0	3.7
18.....	4.5	3.6	6.8	7.1	4.6	3.0	2.6	2.7	3.0	2.8	3.8	3.7
19.....	4.6	3.8	6.7	7.4	4.3	3.0	2.8	3.0	3.2	2.9	3.7	4.0
20.....	4.7	3.8	6.9	6.8	4.1	2.8	2.6	3.1	3.2	2.9	3.7	5.0
21.....	5.2	4.1	6.0	6.0	4.1	2.8	2.5	3.0	3.1	2.9	3.6	4.4
22.....	4.9	4.8	5.3	6.0	4.1	2.7	2.5	3.3	3.0	2.9	3.5	4.2
23.....	4.7	6.0	5.0	5.5	3.9	2.7	2.5	3.3	3.0	3.0	3.5	4.0
24.....	4.6	5.5	4.9	5.4	3.8	2.9	2.5	3.6	3.1	5.5	3.4	3.8
25.....	4.5	5.4	4.5	5.2	3.7	2.7	2.5	3.3	4.0	6.3	3.5	4.0
26.....	4.4	6.0	4.1	5.1	3.6	2.6	2.4	3.6	3.9	5.3	3.7	3.8
27.....	4.3	6.0	4.2	4.8	3.5	2.6	2.5	3.2	3.8	5.2	3.7	3.9
28.....	4.3	6.5	4.3	4.7	3.4	2.5	2.5	3.0	3.5	4.4	3.6	3.6
29.....	4.2	6.0	6.8	4.4	3.4	2.6	2.6	3.0	3.3	4.2	3.5	3.5
30.....	4.2	......	8.2	4.0	3.5	2.5	2.6	3.0	3.5	4.0	3.4	3.9
31.....	4.2	......	6.5	......	3.6	......	2.6	2.9	......	3.8	......	4.8

NOTE.— Relation of gage height to discharge was affected by ice, January 7 to March 15.

Current-meter Discharge Measurements of West Branch, Delaware River, at Hancock, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Computed discharge.
1912.			*Sec.-ft.*
Feb. 23 *a*	C. S. DeGolyer	5.99	1,670
July 27 *b*	Frank Weber	2.58	67.8
July 27 *b*	Frank Weber	2.58	68.7
Nov. 21	Frank Weber	3.71	658

a Measurement made under partial ice cover. *b* Made by wading three-quarters mile above the gage.

Mean Daily Discharge, Second-feet, of West Branch, Delaware River, at Hancock, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	918	......	......	7,090	1,420	506	28	50	225	506	506	380
2	440	......	......	7,090	1,530	380	76	50	1,210	506	1,010	506
3	576	......	......	10,400	1,310	506	28	50	826	380	826	4,390
4	506	......	......	5,390	1,110	506	50	50	652	380	576	3,310
5	506	......	......	4,160	1,010	506	50	50	506	324	506	2,570
6	182	......	......	3,940	918	506	50	50	440	272	506	2,930
7	......	......	......	4,160	1,010	576	50	50	380	272	506	3,120
8	......	......	......	7,090	1,010	506	50	50	324	225	6,210	2,230
9	......	......	......	4,160	1,110	440	50	50	324	182	3,720	1,650
10	......	......	......	3,310	1,010	324	50	50	225	225	2,570	1,110
11	......	......	......	2,930	826	272	50	440	182	225	1,920	1,210
12	......	......	......	2,570	736	324	76	272	225	272	1,530	918
13	......	......	......	2,930	736	225	50	182	225	225	1,310	576
14	......	......	......	2,400	652	225	76	182	182	225	1,310	506
15	......	......	......	2,070	652	225	76	142	182	182	1,110	826
16	......	......	17,100	8,360	576	225	76	142	182	182	918	736
17	......	......	5,930	6,500	1,110	272	50	106	182	182	918	652
18	......	......	5,930	6,790	1,530	225	76	106	225	142	736	652
19	......	......	5,660	7,720	1,210	225	142	225	324	182	652	918
20	......	......	6,210	5,930	1,010	142	76	272	324	182	652	2,070
21	......	......	3,940	3,940	1,010	142	50	225	272	182	576	1,310
22	......	......	2,570	3,940	1,010	106	50	380	225	182	506	1,110
23	......	......	2,070	2,930	826	106	50	380	225	225	506	918
24	......	......	1,920	2,750	736	182	50	576	272	2,930	440	736
25	......	......	1,420	2,400	652	106	50	380	918	4,630	506	918
26	......	......	1,010	2,230	576	76	28	576	826	2,570	652	736
27	......	......	1,110	1,780	506	76	50	324	736	2,400	652	826
28	......	......	1,210	1,650	440	50	50	225	506	1,310	576	576
29	......	......	5,930	1,310	440	76	76	225	380	1,110	506	506
30	......	......	10,400	918	506	50	76	225	506	918	440	826
31	......	......	5,130	......	576	......	76	182	......	736	......	1,780

NOTE.— Daily discharge determined from a fairly well-defined rating curve.

Monthly Discharge of West Branch, Delaware River, at Hancock, N. Y.
[Drainage area, 660 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1912.					
January	....	....	523	0.792	0.91
February	....	....	528	0.80	0.86
March	17,100	....	3,600	5.45	6.28
April	10,400	918	4,290	6.50	7.25
May	1,530	440	895	1.36	1.57
June	576	50	270	0.409	0.46
July	142	28	59.2	0.09	0.10
August	576	50	202	0.306	0.35
September	1,210	182	407	0.617	0.69
October	4,630	182	725	1.10	1.27
November	6,210	440	1,110	1.68	1.87
December	4,390	380	1,340	2.03	2.34

NOTE.— The drainage area given above was computed from U. S. Post Route maps and is more reliable than the figures formerly published. The former value was 680 square miles.

Discharge during the frozen period, January 7 to March 15, estimated from one measurement taken during the period, climatologic records and comparative run-off.

Mean discharge, January 8–31, estimated at 525 second-feet. Mean discharge, March 1–15, estimated at 2,270 second-feet.

WEST BRANCH, DELAWARE RIVER, AT HALE EDDY, N. Y.

This station is located at the steel highway bridge in the village of Hale Eddy, 8½ miles above the junction with the east branch of the Delaware at Hancock, N. Y. The station was established in November, 1912, by the U. S. Geological Survey in coöperation with this Department. One section of the gage is attached to the downstream face of the right-hand bridge abutment and another to a large boulder close to shore and about ten feet from the abutment. The channel is comprised of small boulders and gravel and is apparently of a permanent nature.

The Deposit Electric Power plant, eight miles upstream from this station, affects the low-water flow to some extent.

Mean Daily Gage Height, in Feet, of West Branch, Delaware River, at Hale Eddy, N. Y.

DAY.	Nov.	Dec.
1912.		
1	......	2.72
2	......	3.15
3	......	6.65
4	......	5.55
5	......	5.45
6	......	5.60
7	......	5.35
8	......	4.85
9	......	4.40
10	......	4.02
11	......	3.92
12	......	3.65
13	......	3.15
14	......	3.20
15	3.50	3.32
16	3.29	3.35
17	3.28	3.08
18	3.22	3.08
19	3.10	3.62
20	3.05	4.70
21	2.90	3.95
22	2.70	3.78
23	2.68	3.72
24	2.72	3.40
25	3.05	3.48
26	3.10	3.20
27	3.10	3.48
28	2.95	3.10
29	2.90	3.00
30	2.70	3.28
31	......	5.08

Current-meter Discharge Measurement of West Branch, Delaware River, at Hale Eddy, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Computed discharge.
1912.			*Second-feet.*
Nov. 21 *a*	Frank Weber	2.99	646

a Measurement made by wading.

NEVERSINK RIVER DRAINAGE BASIN.

DESCRIPTION.

The Neversink river is formed by the confluence of the east and west branches of Neversink creek, in the western part of Ulster county. It flows in a southerly direction across the counties of Sullivan and Orange into Delaware river at Port Jervis. Its principal tributaries are Sheldrake creek, coming in from the west through a chain of lakes and joining the river at Thompsonville, about 25 miles from the mouth, and Bush kill a small tributary from the same side, joining at Oakland Valley, some 12 miles farther downstream. From the east Brasher kill, a tributary of considerable importance, formed by the Pine kill and Garmaeu, flows into the Neversink near Godeffroy, about 9 miles from Port Jervis and just above the gaging station, which is located at the suspension highway bridge at this point.

The river drains a narrow valley along the southern slope of the Catskill mountains. There are several reservoirs in the upper watershed, two of which are now in use. The principal power is located at Rose's Point, near Cuddebackville, in the vicinity of the old Delaware and Hudson canal. About one-half mile above this point is a low concrete dam, which diverts water through the old feeder ditch to the plant. This plant supplies Port Jervis, Middletown and other small places in the vicinity with electric light and power.

NEVERSINK RIVER AT GODEFFROY, N. Y.

This station is located at the suspension highway bridge about one-half mile east of the town of Godeffroy and eight miles above the mouth of the river. A staff gage was established at this point, August 4, 1903, and was washed out October 9, in the same year. A new gage was established August 22, 1909, to obtain general statistical and comparative data regarding the flow of the Neversink, and this is maintained by U. S. Geological Survey in coöperation with the State Engineer's Department. This was an enameled iron staff gage bolted to the river face, downstream side of the left-hand abutment. This gage was removed by floods in

January, 1910; replaced by chain gage fastened to cantilever arm on left-hand downstream tower on August 1, 1910. Length of chain, 20.50 feet, making datum same as for old gage.

Bench-mark No. 1 is on the outer corner base stone, right-hand downstream tower, marked with crow's-foot and circle; elevation, 15.996. Bench-mark No. 2 is a spike in a birch tree 14 inches in diameter, blazed 3 feet above the ground, on left-hand side of west approach to bridge, 10 feet from upstream tower; elevation 16.140. Both points are referred to zero of the gage. The datum of the new gage is 0.98 foot lower than the gage of 1903. Therefore all previously published gage heights for this station should have 0.98 foot added, in order to apply to the present datum. The new gage datum has remained the same during the maintenance of the station. Conditions are good for accurate discharge measurements during the open-water period, except for extreme lower water, when wading measurements have to be resorted to, or a bridge about one mile farther downstream used. Area of drainage basin above station is 314.4* square miles; area above mouth, 346* square miles.

Estimates of daily discharge for this station are withheld, pending further investigations regarding diurnal fluctuations due to operation of mills and power plants above. The daily gage heights and rating table for this station are being published in order to make them available to the public. Any use of these data should be made with full knowledge of the uncertain conditions under which they were obtained.

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* From Bien's Atlas of New York State.

Mean Daily Gage Height, in Feet, of Neversink River at Godeffroy, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec
1911.												
1	......	3.76	3.41	5.30	4.38	2.83	......	3.10	4.55	3.45	4.15	3.98
2	......	3.73	3.40	5.20	4.65	2.82	......	3.08	4.40	4.80	4.25	4.05
3	9.15	3.70	3.42	5.20	4.50	2.82	......	3.05	3.70	4.40	3.92	4.02
4	5.50	4.12	3.44	5.20	4.25	2.86	......	3.00	3.30	4.05	3.75	3.98
5	5.15	4.10	3.43	5.15	4.48	3.67	......	2.90	3.40	3.95	3.70	3.82
6	7.15	4.00	3.34	5.15	4.65	3.76	......	2.70	3.90	3.70	3.70	3.75
7	7.15	3.96	4.06	5.10	4.60	3.96	......	2.95	3.65	4.18	3.70	3.72
8	4.10	3.93	4.06	5.35	4.40	3.94	......	3.10	3.55	4.05	3.70	3.82
9	4.50	3.86	4.12	5.05	4.35	3.86	......	2.90	3.45	3.88	3.68	3.72
10	4.15	3.61	4.10	4.32	4.30	3.79	......	2.70	3.60	3.78	3.78	3.68
11	3.67	3.51	4.08	4.70	4.28	3.82	......	2.90	3.62	3.70	3.60	3.75
12	3.74	3.50	4.08	4.20	4.25	......	......	2.80	3.55	3.70	3.75	3.70
13	3.60	3.46	4.02	4.32	4.28	......	......	2.75	3.75	3.62	4.25	3.75
14	3.76	3.38	4.10	4.70	4.25	......	......	2.65	3.75	3.75	4.05	3.68
15	3.68	3.38	4.12	4.62	4.22	......	......	2.75	3.55	3.55	3.90	3.75
16	3.73	3.38	4.10	4.58	4.25	......	......	2.65	3.35	3.50	4.15	4.50
17	3.80	3.38	4.10	4.65	3.83	......	......	2.75	3.35	3.75	3.95	4.55
18	3.88	3.42	4.05	4.62	3.82	......	......	2.85	3.20	4.35	4.20	4.12
19	3.82	3.45	4.04	4.65	3.82	......	......	2.65	3.20	5.55	4.55	4.22
20	3.68	3.48	4.50	4.60	3.76	......	......	2.75	3.20	4.95	4.45	3.95
21	3.71	3.46	4.85	4.60	3.12	......	2.25	2.72	3.45	5.35	4.28	3.70
22	3.62	3.48	4.92	4.60	2.74	......	2.40	2.70	3.30	5.15	4.20	4.10
23	3.64	3.44	5.42	4.55	2.54	......	2.95	2.65	3.22	5.75	4.20	5.22
24	3.76	3.43	4.20	4.55	2.39	......	3.55	2.75	3.25	5.08	4.15	4.78
25	3.66	3.42	4.62	4.55	2.84	......	3.45	3.10	3.20	4.60	4.15	4.70
26	3.68	3.45	4.62	4.50	2.69	......	3.30	3.22	3.25	4.60	4.10	4.40
27	3.51	3.56	4.62	4.52	2.39	......	3.18	3.10	3.38	4.38	4.25	4.30
28	3.62	3.66	6.10	4.60	2.84	......	2.55	3.08	3.35	4.25	3.98	4.35
29	3.66	......	6.00	4.62	2.82	......	2.98	4.05	3.30	4.20	4.20	4.38
30	3.68	......	5.50	4.65	2.83	......	2.75	4.60	3.28	4.20	4.22	4.02
31	3.72	......	5.35	......	2.83	......	3.00	4.45	......	4.10	......	3.92

Mean Daily Gage Height, in Feet, of Neversink River at Godeffroy, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	3.80	......	......	......	4.85	3.52	3.04	2.82	4.05	2.85	3.77	3.47
2	3.58	......	......	......	4.50	3.44	3.07	2.75	3.40	3.05	3.77	3.54
3	3.60	......	......	......	4.28	3.60	3.32	2.85	3.75	3.05	3.70	5.00
4	3.60	......	......	......	4.20	3.50	2.77	2.90	3.45	2.90	3.57	4.70
5	3.64	......	......	......	4.12	3.44	2.87	2.85	3.32	2.80	3.57	4.68
6	3.62	......	......	......	4.15	3.42	3.12	2.75	3.20	2.88	3.50	4.38
7	......	......	......	......	4.25	3.50	2.97	2.75	3.18	2.75	3.37	4.18
8	......	......	......	......	4.30	3.52	3.00	2.75	3.20	2.92	3.30	4.08
9	......	......	......	......	4.35	3.54	2.97	2.80	3.20	......	3.20	3.94
10	......	......	4.70	......	4.28	3.44	2.97	3.20	3.22	......	2.82	3.91
11	......	......	4.85	......	4.22	3.37	2.92	5.95	3.15	......	3.80	3.89
12	......	......	4.75	......	4.20	3.24	3.07	4.55	2.95	......	3.80	3.82
13	......	......	5.95	......	4.18	3.27	3.09	3.80	3.05	......	3.70	3.54
14	......	......	4.80	......	3.75	3.22	2.94	3.30	3.08	......	3.65	3.77
15	......	......	5.20	4.25	3.85	3.15	2.94	3.22	2.85	......	3.82	3.84
16	......	......	6.25	5.25	4.25	3.22	3.00	3.32	3.08	......	3.80	3.64
17	......	......	......	5.35	5.25	3.17	3.07	3.20	3.10	......	3.77	3.69
18	......	......	5.20	5.15	4.75	3.27	3.00	3.48	3.08	......	3.60	3.77
19	......	......	5.35	5.10	4.70	3.20	3.14	3.35	3.05	......	3.45	3.96
20	......	......	5.30	4.82	4.35	3.17	3.12	3.35	3.15	......	3.42	4.16
21	......	......	5.05	4.60	4.22	3.17	3.20	3.32	3.15	......	3.42	3.96
22	......	......	4.65	4.25	4.02	3.22	3.14	3.32	2.92	2.92	3.45	3.84
23	......	......	4.55	4.18	4.05	3.04	2.97	3.45	2.90	3.07	3.42	3.90
24	......	......	4.65	4.30	3.70	3.04	3.12	3.40	3.10	3.42	3.37	3.80
25	......	......	4.60	4.30	3.70	3.07	2.92	3.32	3.55	3.87	3.92	3.82
26	......	......	4.50	4.30	3.70	2.92	2.87	3.28	3.55	3.72	3.92	3.84
27	......	......	4.45	4.18	3.65	2.87	2.97	3.18	3.25	3.74	3.65	3.74
28	......	......	4.70	4.28	3.62	2.82	2.92	3.22	3.12	3.72	3.62	3.84
29	......	......	5.80	4.65	3.80	2.72	2.84	3.15	3.18	2.90	3.50	3.84
30	......	......	5.75	5.20	3.55	2.72	2.72	3.15	3.18	3.77	3.47	4.08
31	......	......	5.30	......	3.45	......	2.84	3.15	......	3.60	......	3.97

Note.— A. M. gage heights were taken at the following times: January 1 to 6, at 8:00; March 10 to 31, at 10:15; April 15 to 29, at 9:00; April 30 to August 24, at 7:00; August 25 to December 31, at 8:00.

P. M. gage heights were taken as follows: January 1 to 6, at 4:30; March 10 to 30, at 6:00; April 15 to August 24, at 7:00; August 25 to September 28, at 6:00; September 29 to October 31, at 5:00; November 1 to December 31, at 4:00.

Current-meter Discharge Measurements of Neversink River at Godeffroy, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Computed discharge.
1912.			*Second-feet.*
July 31 *a*..............	Frank Weber...........................	2.79	58.7
Nov. 23..............	Frank Weber...........................	3.45	29.8

a Made by wading.

Rating Table for Neversink River at Godeffroy, N. Y.

Gage height.	Discharge.	Gage height.	Discharge.	Gage height.	Discharge.	Gage height.	Discharge.
Feet.	*Sec.-ft.*	*Feet.*	*Sec.-ft.*	*Feet.*	*Sec.-ft.*	*Feet.*	*Sec.-ft.*
2.50	15	3.30	230	4.10	800	4.90	1,920
2.60	27	3.40	280	4.20	910	5.00	2,080
2.70	41	3.50	334	4.30	1,030	5.10	2,250
2.80	59	3.60	392	4.40	1,160	5.20	2,420
2.90	82	3.70	458	4.50	1,300	5.30	2,590
3.00	110	3.80	532	4.60	1,450	5.40	2,760
3.10	144	3.90	610	4.70	1,600	5.50	2,930
3.20	184	4.00	700	4.80	1,730	....	....

The above table is not applicable for ice or obstructed channel conditions. It is based on ten discharge measurements made during 1910–1912.

MONGAUP RIVER DRAINAGE BASIN.

DESCRIPTION.

The Mongaup river rises near the village of Bradley in Liberty township, Sullivan county. It flows in a southerly direction through Sullivan county to the Delaware river, into which it empties near the village of Mongaup, about 6 miles northwest of Port Jervis.

The stream has a rather narrow, precipitous, well-timbered drainage basin, which is cut up by numerous small tributaries that form outlets to the various small lakes which characterize this drainage. Among the more important of these tributaries are Middle Mongaup, which joins near Bushville, West Mongaup, which joins near Mongaup Valley, and Black Lake creek, about 6 miles farther downstream. These tributaries are all from the right, while from the left enters Kinne brook, about 3 miles below Mongaup Valley, and Black brook, some 8 or 10 miles farther downstream. The last six or seven miles of the stream's course are along the boundary line between Orange and Sullivan counties.

Throughout its course the stream is very precipitous and it offers several opportunities for power development, the most important of which is Mongaup falls, some 8 or 10 miles above the mouth.

MONGAUP RIVER NEAR RIO, N. Y.

This station is located at the steel highway bridge near Partridge Ranch, about six miles above Mongaup village and about fourteen miles from Port Jervis, N. Y. A standard chain gage was established at this point, December 8, 1906, to obtain general statistical and comparative data regarding the flow of the Mongaup. This station is maintained by Charles H. Cooke, C. E., of New York city, in coöperation with the U. S. Geological Survey and the State Engineer's Department of New York. On account of inability to obtain reliable gage readings, earlier observations at this station have not been published.

The chain has a length of 15.14 feet and is referred to the following bench-marks: No. 1, highest point on a large boulder about fifty feet south of the downstream side of the right abutment marked with the letters " B. M."; elevation 6.118. No. 2, a point on the bridge-seat on the downstream, right abutment; elevation 12.07.

The bridge has a span of 140 feet. There is one channel at all stages and measurements are made from the downstream side of the bridge. The channel above the station is straight for about 500 feet and during low and medium stages is divided into two parts by a small island just above the bridge. The channel below the bridge is straight for about 200 feet, when it makes an abrupt turn to the right. The banks on either side are of medium height and rarely overflow, except during extreme high stages. Conditions for measuring at this point are fairly good, except in low stages, when the current become rather sluggish. Low-water measurements are usually made by wading at the ripples below the bridge.

Mean Daily Gage Height, in Feet, of Mongaup River near Rio, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	1.65	......	......	2.90	2.70	1.32	0.89	0.80	1.04	1.22	1.48	1.31
2	1.60	......	......	2.90	2.30	1.25	0.85	0.74	1.25	1.24	1.60	1.34
3	1.65	......	......	3.80	2.20	2.30	0.82	0.76	1.34	1.16	1.48	2.30
4	1.60	......	2.00	2.90	2.10	......	0.90	0.79	1.14	1.12	1.42	1.90
5	1.55	......	1.80	2.60	1.85	1.55	0.86	0.74	1.06	1.14	1.31	1.70
6	1.60	......	1.55	2.40	1.90	1.50	0.84	0.71	1.01	1.09	1.28	2.10
7	1.50	......	1.15	2.35	1.95	1.80	0.80	0.71	0.92	1.01	1.31	2.10
8	1.65	......	1.02	2.90	2.15	1.55	0.76	0.71	1.02	0.95	2.00	1.60
9	1.80	......	1.90	2.45	2.40	1.38	0.74	0.74	0.95	1.14	1.70	1.70
10	1.80	......	1.95	2.25	2.20	1.29	0.72	0.79	0.91	1.05	1.55	1.65
11	1.80	......	1.70	2.15	1.95	1.24	0.74	2.35	0.92	1.09	1.50	1.55
12	1.85	......	1.70	2.10	1.80	1.21	0.74	1.50	0.90	1.10	1.41	1.49
13	2.35	......	3.60	2.05	1.80	1.21	0.72	1.05	0.90	1.11	1.42	1.35
14	2.25	......	3.10	2.00	1.70	1.15	0.88	1.20	0.85	1.08	1.50	1.48
15	2.10	......	3.20	2.05	2.00	1.12	0.88	1.00	0.85	1.01	1.46	1.35
16	2.00	......	4.50	......	2.30	1.15	0.83	0.95	0.88	1.01	1.39	1.40
17	......	......	3.20	2.35	2.00	1.09	0.80	1.42	0.86	0.95	1.38	1.38
18	......	......	3.00	3.00	1.80	1.11	1.00	1.15	0.94	0.89	1.34	1.34
19	......	......	2.80	3.00	1.70	1.05	0.98	1.42	1.15	0.91	1.28	2.25
20	......	......	2.60	2.70	1.65	1.02	0.84	1.30	1.14	0.96	1.38	2.10
21	......	......	2.25	2.35	1.60	1.06	0.85	1.12	1.01	0.96	1.28	1.90
22	......	......	2.30	2.10	1.60	1.02	1.02	1.20	1.04	0.92	1.26	1.75
23	......	......	1.95	2.25	1.48	0.94	0.95	1.05	1.01	1.35	1.22	1.70
24	......	......	2.05	2.10	1.43	0.95	0.76	1.14	1.18	2.80	1.36	1.60
25	......	......	2.20	2.10	1.45	0.95	0.84	1.04	2.05	2.60	1.70	1.55
26	......	......	1.95	1.90	1.70	0.94	0.84	0.99	1.70	2.25	1.60	1.60
27	......	......	2.00	2.00	1.55	0.98	0.81	0.96	1.45	1.95	1.50	1.70
28	......	......	2.20	1.90	1.40	0.88	0.80	1.04	1.32	1.80	1.42	1.80
29	......	......	4.20	1.80	1.42	0.90	0.79	1.00	1.28	1.70	1.40	1.65
30	......	......	3.60	3.20	1.65	0.89	0.75	0.91	1.26	1.60	1.38	1.70
31	......	......	3.00	......	1.38	......	0.72	0.99	......	1.50	......	2.50

NOTE.— Relation of gage height to discharge was affected by ice, January 8 to March 3.

Current-meter Discharge Measurement of Mongaup River near Rio, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Computed discharge.
1912.			*Sec.-ft.*
July 30 *a*	Frank Weber	0.70	466

a Made by wading.

Mean Daily Discharge, Second-feet, of Mongaup River near Rio, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	370	......	100	1,180	1,020	228	84	63	129	192	292	224
2	345	......	200	1,180	740	202	74	52	202	199	345	236
3	370	......	300	2,010	680	740	68	55	236	171	292	740
4	345	......	560	1,180	620	530	86	61	164	157	268	500
5	322	......	445	950	472	322	77	52	136	164	224	395
6	345	......	322	810	500	300	72	46	118	146	213	620
7	300	......	168	775	530	445	63	46	92	118	224	620
8	......	......	122	1,180	650	322	55	46	122	100	560	345
9	......	......	500	845	810	252	52	52	100	164	395	395
10	......	......	530	710	680	216	48	61	89	132	322	370
11	......	......	395	650	530	199	52	775	92	146	300	322
12	......	......	395	620	445	188	52	300	86	150	264	296
13	......	......	1,810	590	445	188	48	132	86	154	268	240
14	......	......	1,350	560	395	168	81	185	74	143	300	292
15	......	......	1,440	590	560	157	81	115	74	118	284	240
16	......	......	2,790	680	740	168	70	100	81	118	256	260
17	......	......	1,440	775	560	146	63	268	77	100	252	252
18	......	......	1,260	1,260	445	154	115	168	98	84	236	236
19	......	......	1,100	1,260	395	132	109	268	168	89	213	710
20	......	......	950	1,020	370	122	72	220	164	103	252	620
21	......	......	710	775	345	136	74	157	118	103	213	500
22	......	......	740	620	345	122	122	185	129	92	206	420
23	......	......	530	710	292	98	100	132	118	240	192	395
24	......	......	500	620	272	100	55	164	178	1,100	244	345
25	......	......	680	620	280	100	72	129	590	950	395	322
26	......	......	530	500	395	98	72	112	395	710	345	345
27	......	......	560	560	322	109	65	103	280	530	300	395
28	......	......	680	500	260	81	63	129	228	445	268	445
29	......	......	2,440	445	268	86	61	115	213	395	260	370
30	......	......	1,810	1,440	370	84	54	89	206	345	252	395
31	......	......	1,260	......	252	......	48	112	......	300	......	880

NOTE.— Daily discharge determined from a rating curve well defined below 1,000 second-feet.

Monthly Discharge of Mongaup River near Rio, N. Y.
[Drainage area, 189 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1912.					
March	2,790	....	862	4.56	5.26
April	2,010	445	854	4.52	5.04
May	1,020	252	483	2.56	2.95
June	740	81	206	1.09	1.22
July	122	48	71	0.376	0.43
August	775	46	145	0.767	0.88
September	590	74	161	0.852	0.95
October	1,100	84	257	1.36	1.57
November	395	192	281	1.49	1.66
December	880	224	410	2.17	2.50

SUSQUEHANNA RIVER DRAINAGE BASIN.

DESCRIPTION OF SUSQUEHANNA RIVER.

Susquehanna river rises in Otsego lake, in northern Otsego county, N. Y., at an elevation of 1,193 feet above tide and flows in a general southerly direction into Chesapeake bay. Its course is in many places extremely tortuous, crossing the state boundary between New York and Pennsylvania three times. The entire length of the river is about 500 miles, and it drains an area of 27,400 square miles, of which 21,060 square miles lie in Pennsylvania, 6,080 in New York, and 260 in Maryland.

The topography of the basin varies widely in character. In New York the stream and its tributaries flow through a rolling and in places rather broken country. In this part of the course its bed is of gravel or sand, with occasional rock ledges, and its banks are moderately high and not extensively subject to overflow. In Pennsylvania the river enters a mountain region, its banks are high, and it winds and twists among the parallel ranges in a bed composed generally of drift materials, gravel, sand and boulders. In the lower part of its course, from Marietta to Havre de Grace, it occupies a broad, deep valley, varying in width from a few hundred feet to more than a mile, and it is for the most part bounded on either shore by rocky bluffs and table-lands elevated from 100 to 500 feet above its waters.

SUSQUEHANNA RIVER AT BINGHAMTON, N. Y.

This station was established July 31, 1901, by Robert E. Horton, and has since been maintained by the U. S. Geological Survey in coöperation with this Department. It is located at the Washington street bridge, about 800 feet upstream from the junction of Chenango and Susquehanna rivers.

On account of the unfavorable conditions produced by a rift, which extends diagonally across the stream underneath the Washington street bridge, discharge measurements are made at the Exchange street bridge, 1,900 feet upstream.

A standard chain gage is attached to the upstream side of the left span of the Washington street bridge. The gage is upstream from the crest of the rift and over a stretch of smooth water extending to the dam 2,800 feet above. Gage readings are unaffected by backwater from Chenango river at ordinary stages. The gage is read twice each day by William Ray Monroe. The bench-mark is a chisel draft on the corner of the left bridge abutment on the upstream side. Its assumed elevation is 100.00. The elevation of water-surface, when the gage reads zero, is 76.29.

Mean Daily Gage Height, in Feet, of Susquehanna River at Binghamton, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1.....	3.3	2.5	4.7	11.7	5.0	2.8	2.0	1.9	2.1	3.5	3.2	3.0
2.....	3.4	2.5	4.1	13.3	4.3	2.7	2.0	1.9	3.5	3.4	3.2	3.0
3.....	3.2	3.0	3.8	13.2	3.8	2.7	2.0	1.9	3.1	3.1	3.2	7.6
4.....	3.1	2.5	3.6	9.0	3.3	2.9	2.0	1.8	2.6	2.9	3.1	7.6
5.....	2.9	3.2	3.1	7.4	3.2	2.8	2.0	1.9	2.5	2.8	2.9	6.0
6.....	2.8	2.9	3.1	8.8	3.2	2.7	2.0	1.9	2.5	2.7	2.8	5.6
7.....	2.9	2.4	2.6	10.2	3.2	2.7	2.0	1.9	2.4	2.6	2.8	6.4
8.....	3.4	2.6	2.7	12.0	3.4	2.6	2.0	1.9	2.3	2.5	6.8	5.6
9.....	3.3	3.0	3.5	10.9	3.5	2.5	2.0	1.9	2.3	2.5	7.1	4.7
10.....	3.7	3.0	4.0	8.7	3.4	2.4	2.0	1.8	2.2	2.5	5.9	4.1
11.....	4.2	2.4	3.8	7.4	3.3	2.4	2.0	2.1	2.2	2.4	4.9	3.7
12.....	3.8	2.7	3.1	7.1	3.1	2.4	2.0	2.0	2.2	2.5	4.4	3.5
13.....	3.4	2.5	3.5	7.0	3.3	2.3	2.0	2.2	2.2	2.6	4.0	3.2
14.....	3.4	2.4	4.2	6.9	3.1	2.3	1.9	2.1	2.1	2.6	3.9	2.7
15.....	3.2	2.5	5.0	6.2	2.9	2.3	2.0	2.1	2.1	2.7	4.0	2.9
16.....	3.4	2.4	8.2	8.3	2.9	2.2	1.9	2.0	2.3	2.6	3.8	3.1
17.....	3.1	2.2	11.3	7.7	3.9	2.2	2.0	2.0	2.2	2.5	3.6	3.0
18.....	2.8	2.2	10.0	7.2	4.3	2.2	2.0	1.9	2.5	2.5	3.4	2.9
19.....	2.8	2.3	9.8	7.4	4.0	2.2	1.9	2.0	2.5	2.5	3.3	3.1
20.....	3.4	2.4	10.7	7.1	3.5	2.2	1.9	2.0	2.5	2.4	3.2	4.7
21.....	3.0	2.8	9.1	6.0	3.2	2.2	1.9	2.0	2.6	2.5	3.1	4.4
22.....	3.3	4.0	7.0	5.2	3.1	2.2	1.9	2.1	2.6	2.4	3.1	3.7
23.....	3.1	5.1	5.5	5.4	3.0	2.2	1.9	2.4	2.5	2.4	3.0	3.4
24.....	2.9	4.8	5.1	5.7	3.1	2.1	1.9	2.5	2.8	2.6	3.0	3.2
25.....	3.2	4.6	4.6	5.2	2.9	2.1	1.9	2.4	5.1	6.8	3.1	3.1
26.....	2.8	4.9	4.0	4.7	2.8	2.1	1.9	2.8	5.3	6.1	3.3	2.9
27.....	2.6	5.1	3.7	4.2	2.7	2.1	1.9	2.5	4.7	4.9	3.4	3.0
28.....	2.6	5.7	3.9	4.0	2.6	2.0	1.9	2.3	4.1	4.3	3.3	2.9
29.....	2.5	5.7	7.4	3.8	2.6	2.1	1.9	2.2	3.4	3.8	3.2	2.8
30.....	2.5	......	13.0	5.2	2.9	2.0	1.9	2.1	3.6	3.6	3.1	3.0
31.....	2.5	......	11.8	......	3.3	......	1.9	2.1	......	3.4	......	3.6

NOTE.— Gage heights furnished through the courtesy of the U. S. Weather Bureau.
Gage heights, March 18 to 21, and April 1 to 9, affected by backwater from Chenango river and are means of several readings.

Current-meter Discharge Measurements of Susquehanna River at Binghamton, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Computed discharge.
			Second-feet.
1912.			
Mar. 17 *a*......	C. Covert..	10.68	24,100
Mar. 19 *a*......	Alexander McMillan..................................	9.68	16,300
Mar. 20 *a*......	Alexander McMillan..................................	10.67	19,500
April 6 *a*......	Frank Weber...	8.70	13,730
April 7 *a*......	Frank Weber...	10.40	18,000
July 24 *b*......	Frank Weber...	1.87	355

a Measurement made at Exchange St. bridge.
b Measurement made by wading.

Mean Daily Discharge, Second-feet, of Susquehanna River at Binghamton, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	3,290	1,440	6,930	28,800	7,760	2,100	540	410	690	3,790	3,050	2,570
2	3,540	1,440	5,320	34,500	5,850	1,870	540	410	3,790	3,540	3,050	2,570
3	3,050	2,570	4,540	34,100	4,540	1,870	540	410	2,810	2,810	3,050	15,400
4	2,810	1,440	4,040	19,800	3,290	2,330	540	300	1,650	2,330	2,810	15,400
5	2,330	3,050	2,810	10,600	3,050	2,100	540	410	1,440	2,100	2,330	10,600
6	2,100	2,330	2,810	13,700	3,050	1,870	540	410	1,440	1,870	2,100	9,440
7	2,330	1,240	1,650	18,000	3,050	1,870	540	410	1,240	1,650	2,100	11,800
8	3,540	1,650	1,870	22,400	3,540	1,650	540	410	1,050	1,440	13,000	9,440
9	3,290	2,570	3,790	21,400	3,790	1,440	540	410	1,050	1,440	13,900	6,930
10	4,290	2,570	5,060	18,800	3,540	1,240	540	300	860	1,440	10,300	5,320
11	5,580	1,240	4,540	14,800	3,290	1,240	540	690	860	1,240	7,480	4,290
12	4,540	1,870	2,810	13,900	2,810	1,240	540	540	860	1,440	6,120	3,790
13	3,540	1,440	3,790	13,600	3,290	1,050	540	860	860	1,650	5,060	3,050
14	3,540	1,240	5,580	13,200	2,810	1,050	410	690	690	1,650	4,800	1,870
15	3,050	1,440	7,760	11,200	2,330	1,050	540	690	690	1,870	5,060	2,330
16	3,540	1,240	17,300	17,600	2,330	860	410	540	1,050	1,650	4,540	2,810
17	2,810	860	27,400	15,700	4,800	860	540	540	860	1,440	4,040	2,570
18	2,100	860	19,800	14,200	5,850	860	540	410	1,440	1,440	3,540	2,330
19	2,100	1,050	16,300	14,800	5,060	860	410	540	1,440	1,440	3,290	2,810
20	3,540	1,240	18,000	13,900	3,790	860	410	540	1,440	1,240	3,050	6,930
21	2,570	2,100	17,300	10,600	3,050	860	410	540	1,650	1,440	2,810	6,120
22	3,290	5,060	13,900	8,320	2,810	860	410	690	1,650	1,240	2,810	4,290
23	2,810	8,040	9,160	8,880	2,570	860	410	1,240	1,440	1,240	2,570	3,540
24	2,330	7,200	8,040	9,720	2,810	690	410	1,440	2,100	1,650	2,570	3,050
25	3,050	6,660	6,660	8,320	2,330	690	410	1,240	8,040	13,000	2,810	2,810
26	2,100	7,480	5,060	6,930	2,100	690	410	2,100	8,600	10,900	3,290	2,330
27	1,650	8,040	4,290	5,580	1,870	690	410	1,440	6,930	7,480	3,540	2,570
28	1,650	9,720	4,800	5,060	1,650	540	410	1,050	5,320	5,850	3,290	2,330
29	1,440	9,720	14,800	4,540	1,650	690	410	860	3,540	4,540	3,050	2,100
30	1,440	......	33,400	8,320	2,330	540	410	690	4,040	4,040	2,810	2,570
31	1,440	......	29,200	......	3,290	......	410	690	......	3,540	......	4,040

NOTE.— Daily discharge determined from a fairly well-defined rating curve.
Discharge, March 18 to 21 and April 1 to 9, is estimated from discharge measurements and computed effect of backwater from Chenango river.

Monthly Discharge of Susquehanna River at Binghamton, N. Y.
[Drainage area, 2,400 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1912.					
January	5,580	1,440	2,860	1.19	1.37
February	9,720	860	3,340	1.39	1.50
March	33,400	1,650	9,960	4.15	4.78
April	34,500	4,540	14,700	6.12	6.83
May	7,760	1,650	3,360	1.40	1.61
June	2,330	540	1,180	0.492	0.55
July	540	410	477	0.199	0.23
August	2,100	300	706	0.294	0.34
September	8,600	690	2,320	0.967	1.08
October	13,000	1,240	2,980	1.24	1.43
November	13,900	2,100	4,410	1.84	2.05
December	15,400	1,870	5,100	2.12	2.44

SUSQUEHANNA RIVER NEAR CONKLIN, N. Y.

This station was established in November, 1912, by the U. S. Geological Survey in coöperation with this Department. It is located at the steel highway bridge between the villages of Conklin and Kirkwood, five and one-half miles above the mouth of the Chenango river at Binghamton.

A vertical staff gage is bolted to the upstream face of the left-hand abutment of the bridge and reads from 7.2 to 19.6 feet. Twelve feet upstream is an inclined staff gage, reading from 0 to 8.4 feet. The channel consists of small boulders and gravel and seems to be of a permanent nature.

Mean Daily Gage Height, in Feet, of Susquehanna River near Conklin, N. Y.

DAY.	Nov.	Dec.
1912.		
1	......	2.30
2	......	3.12
3	......	6.52
4	......	6.10
5	......	4.98
6	......	4.98
7	......	5.20
8	......	4.62
9	......	3.90
10	......	3.28
11	......	3.02
12	......	2.98
13	3.50	2.55
14	3.54	2.30
15	3.39	2.45
16	3.26	2.42
17	2.98	2.38
18	2.78	2.29
19	2.70	3.00
20	2.58	4.40
21	2.45	3.70
22	2.38	3.05
23	2.20	2.72
24	2.25	2.75
25	2.35	2.65
26	2.68	2.50
27	2.78	2.45
28	2.70	2.38
29	2.62	2.25
30	2.40	2.45
31	......	3.22

Current-meter Discharge Measurements of Susquehanna River near Conklin, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Computed discharge.
			Second-feet.
1912.			
July 25 [a]	Frank Weber	[b] 0.61	361
Nov. 14	Frank Weber	3.57	4,570

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[a] Made by wading 600 feet below bridge.

[b] Distance from reference point to water-surface. Reference point is spike in top of pile at northeasterly corner of first pier from left-hand end.

CHENANGO RIVER.

CHENANGO RIVER AT BINGHAMTON, N. Y.

The gaging station, which was established July 31, 1901, by Robert E. Horton, has since been maintained by the U. S. Geological Survey in coöperation with this Department. It is located at the Court street bridge, Binghamton.

The bridge to which the gage is attached stands squarely across the stream at a point where there is a good bed of gravel and small cobblestones and a smooth, uniform current. The channel is obstructed by three masonry piers supporting the four spans of the bridge, 79 feet clear width each, the bridge having a total length of 337 feet between abutments. A small rift between the station and the confluence of Chenango river with the Susquehanna, about 2,500 feet below, cuts off backwater at ordinary stages of the rivers. For periods during freshets or at times when there is an abnormal rise on one or both streams, either record may be affected by backwater and too great a discharge indicated.

A standard chain gage is attached to the hand-rail of the bridge on the upstream side of the first span from the right bank. The gage is read by William Ray Monroe. The bench-mark is a circular chisel draft on the upstream corner of the bridge-seat on the left abutment. Its assumed elevation is 100.00. The elevation of water-surface, when the gage reads zero, is 65.98.

In estimating the run-off of Chenango river, the area directly tributary to storage reservoirs, from which diversion is made to supply Erie canal, has been deducted from the total natural drainage area. The diversion area of six reservoirs at the head of Chenango river, whose outflow is turned into Erie canal through Oriskany creek, is about 30 square miles. The diversion area of De Ruyter reservoir, at the head of Tioughnioga river, whose outflow is turned into Erie canal through Limestone creek, is 18.2 square miles. These two areas have been subtracted from the natural drainage area of 1,580 square miles, giving an effective area of 1,532 square miles. This estimate is approximate, as no allowance for direct inflow to feeder channels from additional areas, nor for waste into the original stream, has been made. The gross area, from which more or less run-off is diverted, is about 105 square miles.

Current-meter Discharge Measurements of Chenango River at Binghamton, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Computed discharge.
1912.			*Second-feet.*
Feb. 21 *a*	C. S. DeGolyer	6.21	1,350
Mar. 17 *b*	C. C. Covert	15.28	11,600
Mar. 20	C. C. Covert	14.46	15,800
April 5	Frank Weber	11.04	8,350
Aptil 6	Frank Weber	12.67	13,200

a Open water measurement with some ice at control
b Pronounced backwater effect from high water in Susquehanna.

CHENANGO RIVER AT CHENANGO FORKS, N. Y.

The station was established in November, 1912, by the U. S. Geological Survey in coöperation with this Department. It is located 1½ miles below the village of Chenango Forks at the point where the Tioughnioga river enters and 12 miles above the mouth of the Chenango river at Binghamton.

The gage is the inclined type, set in concrete piers. The channel consists of small boulders and gravel and is apparently of a permanent nature.

Mean Daily Gage Height, in Feet, of Chenango River at Chenango Forks, N. Y.

DAY.	Nov.	Dec.
1912.		
1	......	4.00
2	......	4.10
3	......	7.20
4	......	7.30
5	......	6.30
6	......	7.00
7	......	7.00
8	......	6.00
9	......	5.00
10	......	4.45
11	5.22	4.25
12	4.05	4.10
13	4.10	4.00
14	4.25	3.40
15	4.15	4.00
16	4.30	3.50
17	4.25	3.50
18	4.00	3.40
19	4.00	4.28
20	4.00	5.00
21	4.00	5.22
22	4.00	4.92
23	4.00	4.15
24	3.50	4.00
25	3.75	4.05
26	4.00	3.95
27	4.00	4.00
28	4.00	3.85
29	4.00	3.85
30	4.00	3.95
31	......	4.85

CHEMUNG RIVER.

DESCRIPTION.

Chemung river is formed at Painted Post, N. Y., by the confluence of Tioga and Cohocton rivers. Cohocton river lies entirely in the state of New York. Tioga river receives, just above its mouth, Canisteo river, a large tributary, which also has its drainage basin in New York to the south of Cohocton. The drainage area of Tioga river, above the Canisteo, is mainly in Pennsylvania. Chemung river flows southeastward through Corning, Elmira and Chemung, crosses the state line and flows for a short distance in Pennsylvania, then returns to New York, and crosses again to Pennsylvania near Waverly, finally emptying into the Susquehanna near Athens, Bradford county, Pa. The total length of the river is about 40 miles, of which 30 miles lie in New York; the drainage area, measured at the mouth, is 2,520 square miles.

The topographic features of the basin are, as a rule, bold and broad. The hills rise to a height of several hundred feet on either side, within a short distance of the stream. The upland plateau is to a large extent wooded, has impervious soil, no lake storage, and few marsh areas. Tributaries are ramifying and uniformly distributed, though not very numerous, and dry gullies, or flood channels, are common. The main river is sluggish, with low banks and a broad valley or flood plain, which is often overflowed. The concentration of storm waters from the three large streams, which unite just above Corning, makes possible excessive floods. Dikes have been erected in the cities of Elmira and Corning for protection. One of the highest recorded freshets in the stream occurred June 1, 1889. It was preceded by phenomenal rainfall, aggregating several inches in a few hours during the night of May 31. The discharge at this time has been estimated at 67 second-feet per square mile from 2,055 square miles, or 138,000 second-feet.[a]

CHEMUNG RIVER AT CHEMUNG, N. Y.

The gaging station was established September 7, 1903, by Robert E. Horton. It has since been maintained by the U. S. Geological Survey in coöperation with this Department. It is located at the suspension highway bridge, midway between Chemung, N. Y., and Willawana, Pa., near the state line.

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[a] Report of Francis Collingwood, C. E., on the protection of the city of Elmira, N. Y., against floods.

The channel is straight for 700 feet above and 800 feet below the station. The right bank is high, cleared, and not subject to overflow; the left bank is medium height, wooded, and will overflow at high water. The bed of the stream is composed of gravel and is clean and permanent. The current is good. There is but one channel at all stages.

Discharge measurements are made from the downstream side of the bridge, which has a single span of 395 feet. The initial point for soundings is the face of the right abutment on the downstream side.

A standard chain gage is attached to the upstream side of the bridge, near the right bank, and is read twice each day by Daniel L. Orcutt. The bench-mark is formed by three nails driven into a telephone pole 70 feet to the right of the initial point for soundings and about 30 feet upstream. The pole is marked with black paint "U. S. G. S. B. M." Elevation of bench-mark is assumed at 100.00. The elevation of water-surface, when the gage reads zero, is 70.12.

The smooth water reaches of the stream became ice-covered in winter. Needle ice forms over the rapids and is carried under the surface ice. Much of the winter flow apparently filters through these beds of needle ice at times. The conditions render the estimation of the daily discharge in winter impracticable.

Mean Daily Gage Height, in Feet, of Chemung River at Chemung, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	3.23	......	4.20	11.10	7.80	3.75	2.09	1.93	2.23	4.50	3.00	3.30
2	3.23	......	3.75	11.50	6.40	3.35	2.02	1.91	4.50	4.60	3.05	3.35
3	3.11	......	3.45	11.10	5.40	4.00	2.00	1.96	5.10	4.20	2.95	6.30
4	3.01	......	3.35	8.00	4.80	4.30	1.96	1.93	4.40	3.85	2.85	5.90
5	......	......	3.25	7.40	4.40	3.60	2.10	2.05	3.65	3.60	2.85	5.10
6	......	......	3.00	10.20	4.30	3.30	2.08	2.03	3.60	3.40	2.75	5.60
7	......	......	3.00	9.00	4.60	3.10	2.02	1.97	3.45	3.25	2.75	6.30
8	......	......	3.10	9.80	4.70	3.00	2.03	1.95	3.15	3.10	5.90	5.20
9	......	......	4.60	7.50	5.40	2.90	2.00	2.03	2.90	2.95	5.80	4.60
10	......	......	5.00	6.70	5.10	2.75	1.92	2.03	2.75	2.95	5.10	4.10
11	......	......	4.20	6.10	4.70	2.60	2.20	1.95	2.65	3.45	4.60	4.10
12	......	......	3.90	5.60	4.20	2.60	2.40	2.03	2.70	3.75	4.30	3.75
13	......	......	3.70	6.80	4.50	2.55	2.48	2.11	2.60	3.40	4.00	3.35
14	......	......	3.40	6.30	4.70	2.50	2.40	2.19	2.45	3.15	4.00	3.15
15	......	......	3.90	6.00	4.20	2.49	2.25	2.09	2.35	3.00	3.95	3.30
16	......	......	12.70	6.70	4.10	2.41	2.22	2.09	3.10	2.80	3.75	3.50
17	......	......	9.40	6.30	9.50	2.45	2.28	1.97	3.45	2.75	3.55	3.35
18	......	......	10.20	5.70	7.10	2.41	2.24	1.99	3.20	2.70	3.45	3.25
19	......	......	9.40	5.60	5.80	2.35	2.25	2.04	3.05	2.65	3.35	3.55
20	......	......	9.70	5.10	5.10	2.33	2.12	2.05	3.00	2.65	3.25	3.90
21	......	......	7.20	4.70	4.70	2.28	2.10	2.11	2.90	2.37	3.25	3.55
22	......	......	5.80	4.50	4.40	2.25	2.12	2.15	2.65	2.55	3.15	3.35
23	......	......	5.20	4.70	4.40	2.19	2.05	2.33	2.80	2.55	3.05	3.05
24	......	......	4.90	4.90	4.00	2.27	1.95	2.24	5.10	2.75	3.05	3.05
25	......	......	4.40	4.60	3.70	2.19	1.95	2.21	8.40	4.20	3.25	3.15
26	......	......	4.00	4.40	3.50	2.15	1.95	2.22	6.50	4.60	3.45	3.00
27	......	6.70	3.95	4.10	3.30	2.11	1.93	2.31	5.60	4.10	3.50	3.00
28	......	6.20	5.00	4.00	3.20	2.10	2.00	2.77	5.00	3.70	3.50	2.85
29	......	4.60	11.80	4.00	3.15	2.07	1.98	2.65	4.50	3.45	3.40	2.70
30	......	......	14.90	9.10	4.00	2.05	1.93	2.25	5.20	3.31	3.30	2.90
31	......	......	10.00	......	4.40	......	1.93	2.29	......	3.15	......	3.30

NOTE.— Relation of gage height to discharge was affected by ice, February 8 to March 10, 1911, and January 5 to February 26, 1912. There may have been some backwater from ice jams during March, 1912.

On April 20, 1911, the gage was removed from the old bridge and installed on the bank of the river about 250 feet above the bridge. On February 19, 1912, it was placed on the new bridge at about the same location it had on the old bridge. All gage heights have been corrected on the basis of levels, so as to be comparable with those taken with the gage in its original location.

Current-meter Discharge Measurements of Chemung River at Chemung, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Computed discharge.
1912.			Sec.-ft.
Feb. 19 *a*	C. S. De Golyer	3.08	252
Mar. 16	Covert and McMillan	12.03	25,600
Mar. 18	Covert and McMillan	10.51	18,000
Mar. 25	G. H. Canfield	4.35	2,480
April 3	Frank Weber	9.84	18,100
April 4	Frank Weber	8.12	12,300
July 20 *b*	Frank Weber	2.07	282

a Measurement made under complete ice cover.
b Measurement made by wading at a ford, 500 feet downstream.

Mean Daily Discharge, Second-feet, of Chemung River at Chemung, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1911.												
1	2,000	1,500	......	3,170	1,440	315	192	90	690	860	655	1,160
2	4,000	1,560	......	2,470	2,800	325	176	108	520	1,620	815	1,010
3	11,400	1,220	......	2,020	2,980	388	180	78	412	2,800	815	910
4	5,550	960	......	1,820	2,020	330	192	78	335	1,680	690	815
5	2,800	1,010	......	2,630	1,620	355	176	73	285	1,320	620	655
6	2,020	860	......	9,600	1,380	365	130	90	275	1,320	599	730
7	1,950	730	......	13,500	1,220	2,020	136	73	365	1,380	620	655
8	2,160	......	......	11,100	960	1,110	126	93	641	3,560	730	655
9	1,500	......	......	7,050	960	815	122	96	532	2,020	1,110	730
10	1,220	......	......	7,840	860	620	122	78	1,110	1,500	960	860
11	1,110	......	4,620	6,050	815	490	126	84	1,560	1,440	815	1,620
12	1,500	......	6,800	4,840	770	478	116	73	1,010	2,020	770	1,500
13	5,300	......	1,270	3,960	690	2,800	102	66	770	1,750	815	2,020
14	3,760	......	7,050	3,360	620	2,980	102	52	730	1,380	1,060	7,300
15	14,200	......	7,050	4,400	585	1,620	96	96	585	1,110	910	4,400
16	6,550	......	5,300	3,760	550	1,160	87	73	520	960	815	5,550
17	3,170	......	2,630	3,170	550	860	99	84	655	860	770	6,050
18	2,310	......	2,800	2,630	550	690	133	84	520	960	770	4,620
19	1,950	......	2,160	2,470	550	550	136	119	460	1,620	1,380	3,360
20	1,750	......	1,820	4,620	1,110	490	200	90	388	1,500	1,620	2,310
21	1,500	......	1,880	7,300	1,160	412	208	96	335	1,220	1,270	1,820
22	1,380	......	2,470	5,500	770	376	160	75	315	1,060	1.110	1,750
23	1,270	......	5,550	6,050	620	315	122	78	275	1,110	1,010	1,820
24	960	......	4,180	5,060	550	305	122	71	250	1,220	910	2,470
25	860	......	2,310	3,760	585	275	112	96	260	1,060	960	1,880
26	860	......	2,310	2,800	550	315	102	108	275	910	1,060	1,620
27	815	......	4,180	2,310	472	255	102	84	235	770	960	1,680
28	4,180	......	13,800	2,020	400	255	102	108	235	730	910	2,310
29	6.300	......	7,840	1,680	550	220	96	960	315	690	1,060	1,270
30	3,960	......	5,060	1,500	310	216	90	2,470	315	655	1,820	1,110
31	2,470	......	4,180	......	330	......	78	1,110	......	627	......	1,160

NOTE.— Daily discharge determined from a well-defined rating curve.

Daily discharge for 1911 appears to be generally low, for reasons which have not yet been determined. It may be that construction work on the new bridge had some temporary effect on the relation of gage height to discharge.

Mean Daily Discharge, Second-feet, of Chemung River at Chemung, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	1,090	......	2,310	23,800	11,100	1,680	265	192	335	2,800	860	1,160
2	1,090	......	1,680	25,500	7,050	1,220	280	184	2,800	2,980	910	1,220
3	970	......	1,320	23,800	4,620	2,020	220	204	3,960	2,310	815	6,800
4	870	......	1,220	11,800	3,360	2,470	204	192	2,630	1,820	730	5,800
5	......	......	1,110	9,900	2,630	1,500	270	245	1,560	1,500	730	3,960
6	......	......	860	20,000	2,470	1,160	260	235	1,500	1,270	655	5,060
7	......	......	860	15,200	2,980	960	230	208	1,320	1,110	655	6,800
8	......	......	960	18,400	3,170	860	235	200	1,010	960	5,800	4,180
9	......	......	2,980	10,200	4,620	770	220	235	770	815	5,550	2,980
10	......	......	3,760	7,840	3,960	655	188	235	655	815	3,960	2,160
11	......	......	2,310	6,300	3,170	550	320	200	585	1,320	2,980	2,160
12	......	......	1,880	5,060	2,310	550	430	235	620	1,680	2,470	1,680
13	......	......	1,620	8,120	2,800	520	478	275	550	1,270	2,020	1,220
14	......	......	1,270	6,800	3,170	490	430	315	460	1,010	2,020	1,010
15	......	......	1,880	6,050	2,310	484	345	265	400	860	1,950	1,160
16	......	......	31,500	7,840	2,160	436	330	265	270	690	1,680	1,380
17	......	......	16,800	6,800	17,200	460	360	208	1,320	655	1,440	1,220
18	......	......	20,000	5,300	9,000	436	340	216	1,060	620	1,320	1,110
19	......	......	16,800	5,060	5,550	400	345	240	910	585	1,220	1,440
20	......	......	18,000	3,960	3,960	388	280	245	860	585	1,110	1,880
21	......	......	9,300	3,170	3,170	360	270	275	770	412	1,110	1,440
22	......	......	5,550	2,800	2,630	345	280	295	585	520	1,010	1,220
23	......	......	4,180	3,170	2,630	315	245	388	690	520	910	910
24	......	......	3,560	3,560	2,020	355	200	340	3,960	655	910	910
25	......	......	2,630	2,980	1,620	315	200	325	13,200	2.310	1,110	1.010
26	......	......	2,020	2,630	1,380	295	200	330	7,300	2,980	1,320	860
27	......	7,840	1,950	2,160	1,160	275	192	376	5,060	2,160	1,380	860
28	......	6,550	3,760	2,020	1,060	270	220	669	3,760	1,620	1,380	730
29	......	2,980	27,000	2,020	1,010	255	212	585	2,800	1,320	1,270	620
30	......	......	44,500	15,600	2,020	245	192	345	4,180	1,170	1,160	770
31	......	......	19,200	......	2,630	......	192	365	......	1,010	......	1,160

Monthly Discharge of Chemung River at Chemung, N. Y.
[Drainage area, 2,440 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1911.					
January	14,200	815	3,250	1.33	1.53
February	....	....	1,390	0.57	0.59
March	13,800	....	3,450	1.41	1.63
April	13,500	1,500	4,610	1.89	2.11
May	2,980	310	946	0.388	0.45
June	2,980	216	724	0.297	0.33
July	208	78	130	0.053	0.06
August	2,470	52	224	0.092	0.11
September	1,560	235	506	0.207	0.23
October	3,560	627	1,350	0.553	0.64
November	1,820	599	947	0.388	0.43
December	7,300	655	2,120	0.869	1.00
1912.					
January	....	....	700	0.287	0.33
February	....	....	1,500	0.615	0.66
March	44,500	860	8,150	3.340	3.85
April	25,500	2,020	8,930	3.660	4.08
May	17,200	1,010	3,830	1.570	1.81
June	2,470	245	701	0.287	0.32
July	478	188	272	0.111	0.13
August	669	184	287	0.118	0.14
September	13,200	270	2,200	0.902	1.00
October	2,980	412	1,300	0.533	0.61
November	5,800	655	1,680	0.689	0.77
December	6,800	620	2,090	0.857	0.99

NOTE.— Discharge, February 8 to March 10, 1911, and January 5 to February 26, 1912, estimated from climatologic records and comparison with the flow at adjacent stations.

Mean discharge, February 8 to 28, 1911, estimated at 1,480 second-feet. Mean discharge, March 1 to 10, 1911, estimated at 1,170 second-feet.

Mean discharge, January 4 to 31, 1912, estimated at 660 second-feet. Mean discharge, February 1 to 26, 1912, estimated at 1,000 second-feet.

Discharge for 1911 appears to be low throughout the year. No definite reason can be assigned for this.

ALLEGHENY RIVER DRAINAGE BASIN.

DESCRIPTION OF ALLEGHENY RIVER.

Allegheny river, which, with the Monongahela, forms the Ohio at Pittsburg, rises in northern Pennsylvania, flows north into the state of New York, then flows south through western Pennsylvania. The head waters have an elevation of about 2,500 feet and join those of Genesee river on the north and of the Susquehanna on the east. The total length from the source to the mouth at Pittsburg is about 300 miles, 47 of which are in the state of New York. The principal facts concerning this river have been given in a report by George Lehman, assistant engineer, contained in House Document No. 72, Fifty-fifth Congress, third session. Although this river drains a large area, much of which is of an elevated and even mountainous character, yet it is of comparatively small value for water-power. The total fall in 255 miles, between Olean, N. Y., and the mouth, is only 725 feet, or an average of less than 3 feet per mile. This descent is accomplished without abrupt pitches, and with few rapids having a fall of much consequence. The drainage basin of Allegheny river above Red House is comparatively rugged and precipitous. It is mostly covered with brush and light forest. A considerable amount of snow accumulates in the winter and feeds the stream until late in spring. The basin is underlain by shales of the Chemung series, and the depth of soil is usually small, excepting in stream valleys. There are no lakes and no artificial storage tributary to the stream. The Cuba reservoir, which feeds the Erie canal through Genesee river, lies on the divide between the Allegheny and Genesee drainage basins. A part of the overflow from this reservoir passes into the Allegheny, the rest passes into Genesee river. During about half of the year the river is navigable for small steamers to Franklin, 123 miles above Pittsburg.

ALLEGHENY RIVER AT RED HOUSE, N. Y.

This station was established September 4, 1903, by Robert E. Horton. It has since been maintained by the U. S. Geological Survey in coöperation with this Department. It is located at the Red House bridge, near the stations of the Erie and Pennsylvania railroads and about 5 miles below Salamanca, N. Y., about 13 miles above the point where the river leaves New York state. At Olean, N. Y., the wasteway from the Cuba reservoir enters the stream through Olean creek. This reservoir is located on the divide between Oil creek, tributary to Allegheny river, and Genesee river. The storage is commonly turned into Genesee river through the abandoned summit level of Genesee Valley canal, but may be diverted into Oil creek through the guard-lock at the head of the canal.

The channel is straight for 800 feet above and below the station, 494 feet wide between abutments, broken by two piers. The current velocity is well distributed. The right bank is high and does not overflow. The left bank overflows only at flood stages. At extreme high water there is an additional flood channel on the left bank. The bed is of gravel and is regular.

Discharge measurements are made from the downstream side of the bridge. The initial point for soundings is the left end of the downstream side of the bridge.

A standard chain gage is fastened to the upstream side of the bridge near the middle of the left span; length of chain, 24.16 feet. The gage was read twice each day during 1912. The bench-mark is a circle cut on the downstream side of the left abutment; assumed elevation, 100.00. The elevation of water-surface, when the gage reads zero, is 78.91.

Mean Daily Gage Height, in Feet, of Allegheny River at Red House, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	5.40	......	4.25	10.40	7.20	3.70	2.90	3.15	4.60	4.70	4.40	4.45
2	5.50	......	4.35	11.00	6.70	3.65	2.90	3.25	5.00	5.00	4.50	4.80
3	5.40	......	4.60	10.60	6.20	3.85	2.95	3.50	6.60	5.80	4.40	6.90
4	5.40	......	4.60	9.90	5.40	3.55	2.90	3.30	6.20	5.40	4.40	6.85
5	5.50	......	4.80	9.30	5.00	3.55	2.90	3.20	5.80	5.00	4.35	5.80
6	4.90	......	4.80	9.50	4.90	3.55	2.95	3.20	5.60	4.00	4.45	6.70
7	4.90	......	5.00	9.00	4.80	3.40	3.00	3.10	5.00	3.90	5.20	6.20
8	4.90	......	5.00	8.60	4.70	3.35	3.00	3.30	4.80	3.95	5.80	6.20
9	4.90	......	5.00	8.70	4.60	3.30	3.15	3.10	4.50	3.90	5.80	5.60
10	4.90	......	4.90	8.10	4.50	3.25	3.10	3.05	4.10	3.80	5.50	5.10
11	4.90	......	5.00	7.90	4.50	3.20	3.25	3.05	4.60	4.10	5.50	5.20
12	4.90	......	5.00	7.50	4.60	3.20	3.30	3.05	5.00	4.20	5.50	5.40
13	4.90	......	5.20	6.60	4.80	3.20	3.30	3.10	5.00	3.80	5.60	5.50
14	4.90	......	5.20	6.50	5.00	3.20	3.35	3.40	5.40	3.90	5.90	5.40
15	4.90	4.35	5.20	6.40	5.00	3.20	3.30	3.30	5.40	3.80	5.80	4.80
16	4.90	4.35	7.80	6.00	5.40	3.25	3.35	3.25	4.35	3.80	5.50	4.40
17	4.90	4.35	7.00	6.00	6.30	3.20	3.45	3.15	4.10	3.65	5.20	4.40
18	4.90	4.35	7.80	5.80	6.80	3.10	3.40	3.55	4.10	3.60	5.20	4.25
19	4.90	4.30	8.30	5.50	6.60	3.15	3.50	3.45	4.00	3.60	4.80	4.20
20	4.90	4.30	9.50	5.40	5.40	3.10	3.75	3.55	4.00	3.60	4.20	4.10
21	4.90	4.30	8.70	5.30	5.00	3.10	3.60	3.55	3.90	3.65	4.20	4.00
22	4.90	4.30	7.30	5.20	5.20	3.05	3.35	3.60	3.95	3.60	4.00	4.10
23	4.90	4.30	6.40	5.10	4.80	3.00	3.30	3.65	4.00	4.30	4.00	4.00
24	4.90	4.30	6.10	5.00	4.50	3.00	3.25	3.70	4.00	6.20	4.20	4.20
25	4.70	4.35	5.50	5.10	4.60	2.90	3.20	3.65	4.40	5.80	4.00	4.10
26	4.70	4.35	5.00	5.20	4.40	2.95	3.20	4.10	4.45	5.70	3.95	4.00
27	4.70	4.30	5.00	5.20	4.25	2.90	3.20	4.00	4.70	5.40	3.90	4.20
28	4.70	4.30	5.40	5.40	3.95	2.90	3.20	4.20	4.60	5.00	3.95	4.60
29	4.70	4.30	7.90	5.80	3.90	2.90	3.20	4.20	4.80	4.80	3.90	4.60
30	4.70	......	9.60	7.40	3.95	2.90	3.10	4.40	4.70	4.60	3.90	4.55
31	4.70	......	9.80	......	3.90	......	3.10	4.15	......	4.50	......	4.55

NOTE.— Relation of gage height to discharge was affected by ice from January 4 to March 16. Gage heights are to water-surface.

Current-meter Discharge Measurements of Allegheny River at Red House, N. Y.

DATE.	Hydrographer.	Mean gage reading.	Computed discharge.
1912.			*Second-feet.*
Feb. 15 *a*	C. S. DeGolyer	4.37	509
July 15	Frank Weber	3.30	542
Dec. 6	C. S. DeGolyer	6.67	6,670
Dec. 6	C. S. DeGolyer	6.72	7,190

a Measurement under complete ice cover.

Mean Daily Discharge, Second-feet, of Allegheny River at Red House, N. Y.

DAY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912.												
1	4,060	800	470	22,900	8,750	940	256	423	2,160	2,320	1,850	1,920
2	4,310	700	530	26,200	7,080	884	256	500	2,860	2,860	2,000	2,490
3	4,060	700	700	24,000	5,630	1,120	287	722	6,780	4,610	1,850	7,720
4	3,800	700	700	20,300	3,690	775	256	540	5,630	3,690	1,850	7,560
5	3,500	700	800	12,300	2,860	775	256	460	4,610	2,860	1,780	4,610
6	2,920	600	800	18,300	2,670	775	287	460	4,140	1,300	1,920	7,080
7	2,500	600	1,000	15,900	2,490	626	318	386	2,860	1,180	3,260	5,630
8	2,000	600	1,000	14,100	2,320	583	318	540	2,490	1,240	4,610	5,630
9	1,700	600	1,000	14,550	2,160	540	423	386	2,000	1,180	4,610	4,140
10	1,500	500	900	12,050	2,000	500	386	352	1,440	1,060	3,910	3,060
11	1,200	500	1,000	11,250	2,000	460	500	352	2,160	1,440	3,910	3,260
12	1,100	500	1,000	9,800	2,160	460	540	352	2,860	1,570	3,910	3,690
13	1,100	500	1,400	6,780	2,490	460	540	386	2,860	1,060	4,140	3,910
14	1,100	500	1,500	6,480	2,860	460	583	626	3,690	1,180	4,850	3,690
15	1,000	509	2,000	6,190	2,860	460	540	540	3,690	1,060	4,610	2,490
16	1,000	510	8,000	5,100	3,690	500	583	500	1,780	1,060	3,910	1,850
17	1,000	510	8,050	5,100	5,910	460	674	423	1,440	884	3,260	1,850
18	1,000	510	10,850	4,610	7,390	386	626	775	1,440	828	3,260	1,640
19	900	500	12,850	3,910	6,780	423	722	674	1,300	828	2,490	1,570
20	900	500	18,300	3,690	3,690	386	1,000	775	1,300	828	1,570	1,440
21	900	500	14,550	3,470	2,860	386	828	775	1,180	884	1,570	1,300
22	900	500	9,100	3,260	3,260	352	583	828	1,240	828	1,300	1,440
23	900	500	6,190	3,060	2,490	318	540	884	1,300	1,710	1,300	1,300
24	900	500	5,360	2,860	2,000	318	500	940	1,300	5,630	1,570	1,570
25	800	510	3,910	3,060	2,160	256	460	884	1,850	4,610	1,300	1,440
26	800	510	2,860	3,260	1,850	287	460	1,440	1,920	4,370	1,240	1,300
27	800	500	2,860	3,260	1,640	256	460	1,300	2,320	3,690	1,180	1,570
28	800	500	3,690	3,690	1,240	256	460	1,570	2,160	2,860	1,240	2,160
29	800	500	11,250	4,610	1,180	256	460	1,570	2,490	2,490	1,180	2,160
30	800	......	18,800	9,450	1,240	256	386	1,850	2,320	2,160	1,180	2,080
31	800	......	19,800	......	1,180	......	386	1,500	......	2,000	......	2,080

NOTE.— Discharge determined from a fairly well-defined rating curve.

Monthly Discharge of Allegheny River at Red House, N. Y.

[Drainage area, 1,640 square miles.]

MONTH.	DISCHARGE IN SECOND-FEET.				RUN-OFF.
	Maximum.	Minimum.	Mean.	Per square mile.	Depth in inches on drainage area.
1912.					
January	4,310	800	1,610	0.982	1.13
February	800	500	554	0.338	0.36
March	19,800	470	5,520	3.37	3.88
April	26,200	2,860	9,480	5.78	6.45
May	8,750	1,180	3,240	1.98	2.28
June	1,120	256	497	0.303	0.34
July	1,000	256	480	0.293	0.34
August	1,850	352	765	0.466	0.54
September	6,780	1,180	2,520	1.54	1.72
October	5,630	828	2,070	1.26	1.45
November	4,850	1,180	2,550	1.55	1.73
December	7,720	1,300	3,020	1.84	2.12

CONCLUSION.

The gaging records as given in this report are considered to represent existing conditions with a reasonable degree of accuracy. In this class of work much depends on the faithfulness with which gage readers perform their duties and the condition in which gages are maintained. Every effort has been made to see that the gages have been read regularly and correctly and kept in good repair.

In some cases, where several gaging stations are maintained at different points on the same stream, inconsistencies are apparent, but even so, these records are considered valuable, as they present a means of estimating the discharge that otherwise would be totally lacking.

There are numerous records published in this report which supersede those previously published. This is due to data obtained since these records were first computed. Undoubtedly other records here given will be found subject to revision when further data are obtained and rating curves more definitely defined.

Respectfully submitted,
JOHN P. NEWTON,
Assistant Engineer.

INDEX.

Supplement to the Annual Report of the State Engineer and Surveyor of New York, 1912.

A. PAGE.

Acknowledgment for records furnished........ 6
Allegheny river drainage basin:
  Description........ 252–3
  Gaging station, Red House........ 253–5
Alloway, Canandaigua outlet, gaging station........77, 90, 95–6
Astoronga Mill, Little Falls, Mohawk river, gaging station.....140, 154–5
Ausable Forks, Ausable river, gaging station........ 13–17
Ausable river, description, drainage areas and gaging station at Ausable Forks........ 12–17

B.

Baldwinsville, above dam, Seneca river, gaging station........ 77, 80
Baldwinsville, below dam, Seneca river, gaging station........ 77, 80
Battle Island, above dam, Oswego river, gaging station........ 47, 51
Battle Island, above dam, west side, Oswego river, gaging station.. 47, 51
Battle Island, below dam, Oswego river, gaging station........ 47, 50
Battle Island, opposite, Oswego river, gaging station........47, 50, 55–6
Binghamton, Chenango river, gaging station........ 246–7
Binghamton, Susquehanna river, gaging station........ 242–4
Black river drainage basin:
  Description........ 33–4
  Gaging stations:
    Felts Mills, Black river........ 34–5
    Moose River village, Moose river........ 36–8
Board of Claims, hydraulic work for........ 5
Bog river, description and gaging station near Tupper lake........ 28–30
Brewerton, Oneida river, gaging station........ 59, 62
Butternut creek, description and gaging station at Jamesville...... 59, 67–9

C.

Canadice lake, description and gaging station near Hemlock........ 116–7
Canajoharie, Mohawk river, gaging station........ 140, 145
Canandaigua lake, Canandaigua, gaging station 77
Canandaigua outlet, description and gaging station at Alloway...77, 90, 94–6
Canaseraga creek drainage basin, description and gaging station at Dansville........ 107–12
Caughdenoy, above lock, Oneida river, gaging station........ 59, 62
Caughdenoy, at dam, Oneida river, gaging station........ 63–4
Caughdenoy, below lock, Oneida river, gaging station........ 59, 61
Cayuga lake, foot of, Seneca river, gaging station........ 77, 83
Cayuga lake, Ithaca, gaging station........ 77

PAGE.

Central Bridge, Schoharie creek, gaging station.................. 140, 144
Chemung, Chemung river, gaging station.......................... 248–52
Chemung river, description and gaging station at Chemung......... 248–52
Chenango Forks, Chenango river, gaging station.................. 247
Chenango river, gaging stations:
  Binghamton 246–7
  Chenango Forks 247
Chittenango, Chittenango creek, gaging station.................... 59, 66–7
Chittenango creek drainage basin, description and gaging station at Chittenango 59, 65–7
Claims, Board of, hydraulic work for........................... 5
Clyde, Clyde river, gaging station.............................. 77, 88, 93
Clyde river:
  Description 93
  Gaging stations:
    Clyde 77, 88, 93
    Lyons 77, 88, 93–4
Cohoes, Mohawk river, gaging station............................ 140, 141
Conklin, near, Susquehanna river, gaging station.................. 245
Conservation Commission, records furnished, acknowledgment....... 6
Corinth, Hudson river, gaging station........................... 188
Corinth, precipitation 223
Crescent, Stony creek, gaging station......................... 140
Crocker's reef, above dam, Hudson river, gaging station....188, 195, 201–3
Cross lake, near Jordan, Seneca river, gaging station............... 77, 81

D.

Dansville, Canaseraga creek, gaging station...................... 108–12
Deerfield reservoir, near Utica, precipitation..................... 183
Delaware river drainage basin:
  Description 224–5
  Gaging stations:
    Fish Eddy, East branch, Delaware river.................. 230–1
    Godeffroy, Neversink river............................... 235–8
    Hale Eddy, West branch, Delaware river.................. 234
    Hancock, East branch, Delaware river.................... 228–30
    Hancock, West branch, Delaware river................... 231–3
    Port Jervis, Delaware river............................. 225–7
    Rio, near, Mongaup river............................... 239–41
Dolgeville, East Canada creek, gaging station...................140, 165–6
Drainage areas. (*See* names of localities.)
Dunsbach Ferry, Mohawk river, gaging station.................... 140, 142

E.

Eagle Bridge, Hoosic river, gaging station........................ 212–5
East Canada creek:
  Drainage areas 164
  Gaging stations:
    Dolgeville, above dam..................................140, 165-6
    Dolgeville, below dam..................................140, 165–6

PAGE.
Erie canal, Pendleton, change bridge, gaging station 100, 118
Erie canal, Tonawanda, Delaware avenue, gaging station 100, 118
Esopus creek drainage basin:
- Description 124
- Gaging stations:
  - Mt. Marion 124–5
  - Olive Bridge, weir 126–7

F.

Fayetteville, Limestone creek, gaging stations 59, 70–1
Felts Mills, Black river, gaging station 34–5
Fish Eddy, East branch, Delaware river, gaging station 230–1
Flint creek, Phelps, gaging station 77
Fonda, Fultonville bridge, Mohawk river, gaging station 140, 145
Fort Edward, above I. P. Co.'s dam, Hudson river, gaging station 188, 203–5
Fort Edward, below I. P. Co.'s dam, Hudson river, gaging station 188
Fort Edward, Bridge street, Hudson river, gaging station 188, 196
Fort Hunter, Schoharie creek, gaging station 140, 144, 159
Fort Miller, above dam, Hudson river, gaging station 188, 195
Fort Miller, below dam, Hudson river, gaging station 188, 194
Fort Montgomery, Rouses Point, Richelieu river, gaging station 9–11
Fort Plain, Mohawk river, gaging station 140, 146
Fox Ridge, N. Y. C. R. R. bridge, Seneca river, gaging station 77, 82
Fox's bridge, near Pulaski, Salmon river, gaging station 39–41
Fulton, above Oswego Falls dam, Oswego river, gaging station 47, 52
Fulton, L. H. & P. Co.'s head-gates, Oswego river, gaging station 47
Fulton, L. H. & P. Co.'s tail-race, Oswego river, gaging station 47
Fulton, mouth of Ox creek, Oswego river, gaging station 47, 53
Fulton, mouth of Waterhouse creek, Oswego river, gaging station 47, 52
Fultonville, bridge, Mohawk river, gaging station 140, 145

G.

Ganargua creek, near Palmyra, gaging station 77, 89
Ganargua creek, north of Newark, gaging station 77, 89
Genesee river drainage basin:
- Description 98–9
- Drainage areas 99
- Gaging stations:
  - Dansville, Canaseraga creek 108–12
  - Hemlock, Canadice lake outlet 116–7
  - Mt. Morris, near, Jones bridge, Genesee river 102–4
  - Rochester, Elmwood avenue, Genesee river 100–2
  - Sonyea, Keshequa creek 112–6
  - St. Helena, Genesee river 105–7
- Water-surface gages maintained 100

Geneva, above guard-lock, Seneca river, gaging station 77, 86
Geneva, below guard-lock, Seneca river, gaging station 77, 85
Geneva, pumping station, Seneca lake, gaging station 86–7
Geneva, steamboat landing, Seneca lake, gaging station 87

PAGE.

Geological Survey, U. S., coöperation with 5–6
Glens Falls, above feeder dam, Hudson river, gaging station 188, 196
Glens Falls, precipitation 223
Godeffroy, Neversink river, gaging station 235–8
Graefenburg, near Utica, precipitation 182
Grant, near, Twin Rock bridge, precipitation 184
Grant, near, Twin Rock bridge, West Canada creek, gaging station 140, 176–7

H.

Hadley, near, cable station, Sacandaga river, gaging station 216–8
Hale Eddy, West branch, Delaware river, gaging station 234
Hancock, East branch, Delaware river, gaging station 228–30
Hancock, West branch, Delaware river, gaging station 231–3
Hemlock, near, Canadice lake outlet, gaging station 116–7
Herkimer, near, Kast bridge, gaging station 140, 147, 169–70
Herkimer, near, Mohawk river, gaging station 140, 155–6
Hinmansville bridge, Oswego river, gaging station 47, 53
Hoffmeister, precipitation 185
Hoosick Falls, Hoosic river, gaging station 188
Hoosick Falls, precipitation 222
Hoosic river:
- Description 209–10
- Gaging stations:
  - Eagle Bridge 212–5
  - Hoosick Falls 188
  - Johnsonville 211–2
  - Schaghticoke 210–1
- Precipitation, Hoosick Falls 222

Hudson river drainage basin:
- Description 119
- (*See also* "Lower Hudson river drainage basin," "Mohawk river drainage basin," *and* "Upper Hudson river drainage basin.")

Hydraulics, bureau of, scope of work 5

I.

Irondequoit creek drainage basin, description and drainage areas 97
Ithaca, Cayuga lake, gaging station 77

J.

Jack's reef, at foot of, Memphis, Seneca river, gaging station 77, 81
Jamesville, near, Butternut creek, gaging station 59, 68–69
Johnsonville, Hoosic river, gaging station 211–2
Jones Bridge, near Mt. Morris, Genesee river, gaging station 102–4
Jordan, Cross lake bridge, Seneca river, gaging station 77, 81

K.

Kast bridge, near Herkimer, West Canada creek, gaging station 140, 147, 169–70
Kenwood, Oneida creek, gaging station 59, 74–5
Keshequa creek drainage basin, description and gaging station at Sonyea 112–6
Kinderhook creek, gaging station at Rossman 128–32

L. PAGE.

Lackawack, Rondout creek, gaging station........................ 122–3
Lake Champlain drainage basin:
  Description 7–8
  Drainage areas 8–9, 11, 13
  Gaging stations:
    Ausable Forks, Ausable river............................ 13–17
    Fort Montgomery, Rouses Point, Richelieu river........... 9–11
    Plattsburg, near, Saranac river.......................... 12
    Whitehall, Wood creek...............................18–19, 188
Lake Ontario drainage:
  Description 33
  (*See also* " Black river drainage basin," " Genesee river drainage basin," " Irondequoit creek drainage basin," " Niagara river drainage," " Oswego–Oneida–Seneca river drainage basin," *and* " Salmon river drainage basin.")
Liberty Mills, near, free bridge, Hudson river, gaging station....... 118, 193
Limestone creek:
  Description 70
  Gaging stations:
    Fayetteville 59, 70–1
    Manlius 59, 71–3
Little Falls, above State dam, Mohawk river, gaging station........ 140, 146
Little Falls, lower dam, Mohawk river, gaging station......140, 146, 154–5
Liverpool, near, Long Branch, Onondaga outlet, gaging station...... 77, 78
Liverpool, near, Mud lock, Seneca river, gaging station............. 77, 78
Long Branch, near, Mud lock, Seneca river, gaging station......... 77, 78
Long Branch, Onondaga outlet, gaging station..................... 77, 78
Lower Hudson river drainage basin:
  Description 120
  Gaging stations:
    Lackawack, Rondout creek............................... 122–3
    Mt. Marion, Esopus creek............................... 124–5
    Olive Bridge, weir, Esopus creek........................ 126–7
    Rosendale, Rondout creek............................... 120–2
    Rossman, Kinderhook creek.............................. 128–32
Lyons, Clyde river, gaging station..............................77, 88, 93–4
Lyons, near, Alloway bridge, Canandaigua outlet, gaging station..77, 90, 95–6

M.

Manlius, Limestone creek, gaging station......................... 59, 71–3
Massena Springs, Raquette river, gaging station.................. 19–22
Mechanicville, above Adirondack E. P. Corp.'s dam, Hudson river, gaging station 188, 190, 198–9
Mechanicville, below Adirondack E. P. Corp.'s dam, Hudson river, gaging station 188, 190
Mechanicville, B. & M. R. R. bridge, Hudson river, gaging station... 188, 191
Mechanicville, precipitation 222
Mechanicville, toll bridge, Hudson river, gaging station............ 188, 191
Mechanicville, West Virginia Pulp and Paper Co.'s mill, Hudson river, gaging station 200–1
Memphis, below Jack's reef, Seneca river, gaging station........... 77, 81

PAGE.
Middleburg, Schoharie creek, gaging station, 140, 159–62
Minetto, above dam, Oswego river, gaging station, 47, 49
Minetto, below dam, Oswego river, gaging station, 47, 49
Minetto, near, opposite Battle Island, Oswego river, gaging station, 47, 50, 55–6
Mohawk river drainage basin:
  Description, 132–3
  Drainage areas, 134–9
  Gaging stations:
    Canajoharie, Mohawk river, 140, 145
    Central Bridge. (*See* "Schoharie Junction.")
    Cohoes, Mohawk river, 140, 141
    Crescent, Stony creek, 140
    Dolgeville, East Canada creek, 140, 165–6
    Dunsbach Ferry, Mohawk river, 140, 142
    Fonda, Fultonville bridge, Mohawk river, 140, 145
    Fort Hunter, Schoharie creek, 140, 144, 159
    Fort Plain, Mohawk river, 140, 146
    Grant, near, Twin Rock bridge, West Canada creek, 140, 176–7
    Herkimer, near, Mohawk river, 140, 155–6
    Kast bridge, near Herkimer, West Canada creek, 140, 147, 169–70
    Little Falls, above State dam, Mohawk river, 140, 146
    Little Falls, lower dam, Mohawk river, 140, 154–5
    Middleburg, Schoharie creek, 140, 159–62
    Poland, West Canada creek, 140, 171–2
    Prattsville, Schoharie creek, 162–3
    Rexford Flats, Mohawk river, 140, 142
    Ridge Mills, above dam, Mohawk river, 140, 152
    Ridge Mills, below dam, Mohawk river, 140, 151
    Rome, above State dam, Mohawk river, 140, 150
    Rome, below State dam, Mohawk river, 140, 150
    Rome, Floyd avenue, Mohawk river, 140, 151, 156–7
    Schenectady, Mohawk river, 140, 143
    Schoharie Junction, Schoharie creek, 140, 144
    Stittville, near, Powell's bridge, Nine-Mile creek, 140, 149, 179–81
    Trenton Falls, Morgan dam, West Canada creek, 140, 147
    Trenton Falls, Power Co.'s dam, West Canada creek, 140, 148, 173–6
    Tribes Hill, Mohawk river, 140, 143, 152–3
    Utica, Genesee street bridge, Mohawk river, 140, 149
    Waterford, Mohawk river, 140, 141
    Wilmurt, West Canada creek, 140, 177–9
  Precipitation records:
    Deerfield reservoir, near Utica, 183
    Graefenburg, near Utica, 182
    Hoffmeister, 185
    Savage reservoir, near Utica, 183
    Trenton Falls, 184
    Tribes Hill, 181
    Twin Rock bridge, near Grant, 184
    Utica, 182
  Water-surface elevation records, 139–52

PAGE.
Mongaup river drainage basin, description and gaging station at Rio. 238–41
Moose river, description and gaging station at Moose River village... 36-8
Mosquito Point bridge, Port Byron, Seneca river, gaging station.... 77, 82
Mt. Marion, Esopus creek, gaging station........................ 124–5
Mt. Morris, near, Jones bridge, Genesee river, gaging station........ 102–4
Mud lock, near Long Branch, Seneca river, gaging station.......... 77, 78

N.

Neversink river drainage basin, description and gaging station at Godeffroy 235–8
Newark, north of, Ganargua creek, gaging station................ 77, 89
New York City Board of Water Supply, records furnished, acknowledgment 6
Niagara river drainage:
  Description 117
  Gaging stations:
    Pendleton, change bridge, Erie canal.................... 100, 118
    Tonawanda, Delaware avenue, Erie canal.................. 100, 118
  Water-surface gages, location.......................... 100
Nine-Mile creek, Powell's bridge, near Stittville, gaging station 140, 149, 179–81
North Creek, Hudson river, gaging station....................... 207–9
Northumberland, above dam, Hudson river, gaging station.......... 188, 194
Northville, precipitation 224
Northville, Sacandaga river, gaging station...................... 188

O.

Oak Orchard, above dam, Oneida river, gaging station.............. 59, 61
Oak Orchard, below dam, Oneida river, gaging station.............. 59, 60
Ogdensburg, Oswegatchie river, gaging station.................... 31–2
Olive Bridge, weir, Esopus creek, gaging station.................. 126–7
Oneida creek, description and gaging station at Kenwood........... 59, 73–5
Oneida river drainage basin. (*See* "Oswego–Oneida–Seneca river drainage basin.")
Onondaga creek, Syracuse, Temple street, gaging station............ 77, 79
Onondaga lake, Syracuse, gaging station.......................... 77, 79
Onondaga outlet, near Long Branch, gaging station................ 77, 78
Oswegatchie river, description and gaging station near Ogdensburg.. 30–2
Oswego, above curved dam, Oswego river, gaging station............ 47, 48
Oswego, above high dam, Oswego river, gaging station............. 47, 48
Oswego, below high dam, Oswego river, gaging station............. 47
Oswego Falls, above dam, Oswego river, gaging station............ 47, 52
Oswego–Oneida–Seneca river drainage basin:
  Description 42
  Drainage areas 43–6
  Gaging stations, Oneida river basin:
    Brewerton, Oneida river.................................. 59, 62
    Caughdenoy, above lock, Oneida river.................... 59, 62
    Caughdenoy, at dam, Oneida river....................... 63–4

Oswego-Oneida-Seneca river drainage basin— (*Continued*):
  Gaging stations, Oneida river basin— (*Continued*): PAGE.
    Caughdenoy, below lock, Oneida river.......... 59, 61
    Chittenango, Chittenango creek.......... 59, 66-7
    Fayetteville, above dam, Limestone creek.......... 59, 70-1
    Fayetteville, Limestone creek feeder.......... 59
    Jamesville, Butternut creek.......... 59, 68-9
    Kenwood, Oneida creek.......... 59, 74-5
    Manlius, Limestone creek.......... 59, 71-3
    Oak Orchard, above dam, Oneida river.......... 59, 61
    Oak Orchard, below dam, Oneida river.......... 59, 60
    Sylvan Beach, Oneida lake.......... 59, 63
    Three River Point, Oneida river.......... 59, 60
  Gaging stations, Oswego river basin:
    Battle Island, above dam.......... 47, 51
    Battle Island, above dam, west side.......... 47, 51
    Battle Island, below dam.......... 47, 50
    Battle Island, opposite.......... 47, 50, 55-6
    Fulton, above Oswego Falls dam.......... 47, 52
    Fulton, L. H. & P. Co.'s head-gates.......... 47
    Fulton, L. H. & P. Co.'s tail-race.......... 47
    Fulton, mouth of Ox creek.......... 47, 53
    Fulton, mouth of Waterhouse creek.......... 47, 52
    Hinmansville bridge.......... 47, 53
    Minetto, above dam.......... 47, 49
    Minetto, below dam.......... 47, 49
    Oswego, above curved dam.......... 47, 48
    Oswego, above high dam.......... 47, 48
    Oswego, below high dam.......... 47
    Phoenix, above dam.......... 47, 54
    Phoenix, below dam.......... 47, 54
  Gaging stations, Seneca river basin:
    Alloway, Canandaigua outlet.......... 77, 90, 95-6
    Baldwinsville, above dam, Seneca river.......... 77, 80
    Baldwinsville, below dam, Seneca river.......... 77, 80
    Canandaigua, Canandaigua lake.......... 77
    Cayuga lake, foot of, Seneca river.......... 77, 83
    Clyde, Clyde river.......... 77, 88, 93
    Fox Ridge, N. Y. C. R. R. bridge, Seneca river.......... 77, 82
    Geneva, above guard-lock, Seneca river.......... 77, 86
    Geneva, below guard-lock, Seneca river.......... 77, 85
    Geneva, pumping station, Seneca lake.......... 86-7
    Geneva, steamboat landing, Seneca lake.......... 87
    Ithaca, Cayuga lake.......... 77
    Jordan, Cross lake bridge, Seneca river.......... 77, 81
    Long Branch, Onondaga outlet.......... 77, 78
    Lyons, Clyde river.......... 77, 88, 93-4
    Memphis, below Jack's reef, Seneca river.......... 77, 81
    Mosquito Point bridge, Port Byron, Seneca river.......... 77, 82
    Mud lock, near Long Branch, Seneca river.......... 77, 78

Oswego–Oneida–Seneca river drainage basin— (*Continued*):
  Gaging stations, Seneca river basin— (*Continued*): PAGE.
    Newark, north of, Ganargua creek........ 77, 89
    Palmyra, Ganargua creek........ 77, 89
    Phelps, Flint creek........ 77
    Seneca Falls, above lock No. 3, Seneca river........ 77, 84
    Seneca Falls, below lock No. 6, Seneca river........ 77, 83, 91–2
    Syracuse, Onondaga lake........ 77, 79
    Syracuse, Temple street, Onondaga creek........ 77, 79
    Waterloo, above lock No. 1, Seneca river........ 77, 85
    Waterloo, below lock No. 2, Seneca river........ 77, 84
  Oneida lake and river:
    Description 42, 57
    Drainage areas 43–4
    Water-surface elevation records........ 57–63
    Water-surface gages, location........ 59
  Oswego river:
    Description 42, 46
    Drainage areas 46
    Water-surface elevation records........ 46–54
    Water-surface gages, location........ 47
  Seneca river:
    Description 42, 76
    Drainage areas 44–5
    Water-surface elevation records........ 72–86
    Water-surface gages, location........ 77
Ox creek, mouth of, Oswego river, gaging station........ 47, 53

P.

Palmyra, Ganargua creek, gaging station........ 77, 89
Pendleton, change bridge, Erie canal, gaging station........ 100, 118
Phelps, Flint creek, gaging station........ 77
Phoenix, above dam, Oswego river, gaging station........ 47, 54
Phoenix, below dam, Oswego river, gaging station........ 47, 54
Phoenix, near, Hinmansville bridge, Oswego river, gaging station.... 47, 53
Piercefield, Raquette river, gaging station........ 22–5
Plattsburg, Saranac river, gaging station........ 12
Poland, West Canada creek, gaging station........ 140, 171–2
Port Byron, Mosquito Point bridge, Seneca river, gaging station..... 77, 82
Port Jervis, Delaware river, gaging station........ 225–7
Powell's bridge, near Stittville, Nine-Mile creek, gaging station 140, 149, 179–81
Prattsville, Schoharie creek, gaging station........ 162–3
Precipitation records:
  Corinth 223
  Deerfield reservoir, near Utica........ 183
  Glens Falls 223
  Graefenburg, near Utica........ 182
  Hoffmeister 185
  Hoosick Falls 222

Precipitation records— (*Continued*): PAGE.
    Mechanicville ... 222
    Northville ... 224
    Savage reservoir, near Utica ... 183
    Trenton Falls ... 184
    Tribes Hill ... 181
    Troy ... 221
    Twin Rock bridge, near Grant ... 184
    Utica ... 182
Pulaski, near, Fox's bridge, Salmon river, gaging station ... 39–41

R.

Rain gages. (*See* "Precipitation records.")
Raquette Falls, near Coreys, Raquette river, gaging station ... 26–8
Raquette river:
    Description ... 19
    Gaging stations:
        Massena Springs ... 19–22
        Piercefield ... 22–5
        Raquette Falls, near Coreys ... 26-8
Red House, Allegheny river, gaging station ... 253–5
Rexford Flats, above dam, Mohawk river, gaging station ... 140, 142
Richelieu river, Fort Montgomery, Rouses Point, gaging station ... 9–11
Ridge Mills, above dam, Mohawk river, gaging station ... 140, 152
Ridge Mills, below dam, Mohawk river, gaging station ... 140, 151
Rio, near, Mongaup river, gaging station ... 239–41
Riverbank, Schroon river, gaging station ... 218–21
Rochester, Elmwood avenue, Genesee river, gaging station ... 100–2
Rome, above State dam, Mohawk river, gaging station ... 140, 150
Rome, below State dam, Mohawk river, gaging station ... 140, 150
Rome, Floyd avenue, Mohawk river, gaging station ... 140, 151, 156–7
Rondout creek drainage basin:
    Description ... 120
    Gaging stations:
        Lackawack ... 122–3
        Rosendale ... 120–2
Rosendale, Rondout creek, gaging station ... 120–2
Rossman, Kinderhook creek, gaging station ... 128–32
Rouses Point, Fort Mortgomery, Richelieu river, gaging station ... 9–11

S.

Sacandaga river:
    Description ... 215–6
    Gaging stations:
        Hadley, near, cable station ... 216–8
        Northville ... 188
    Precipitation, Northville ... 224
Salmon river drainage basin, description and gaging station at Fox's bridge, near Pulaski ... 39–41
Saranac river, description, drainage areas and gaging station near Plattsburg ... 11–12